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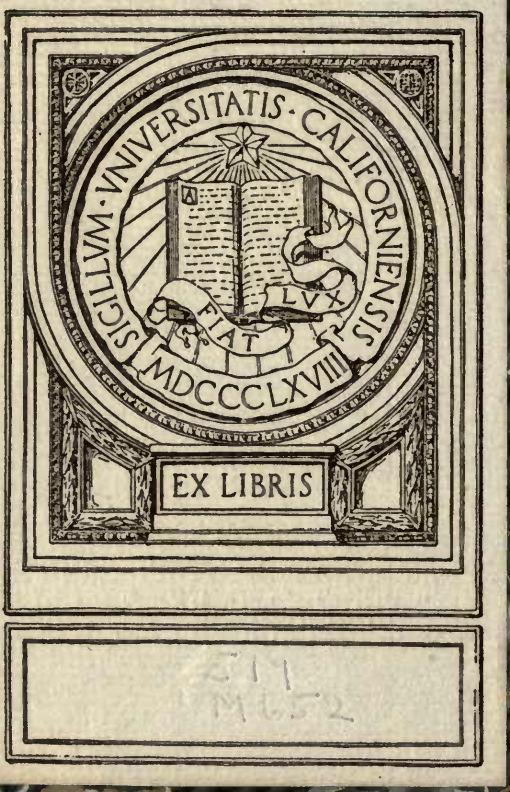
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WHAT ENGLAND CAN TEACH US ABOUT GARDENING

WHAT ENGLAND CAN TEACH US
ABOUT GARDENING

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PERENNIAL LARKSPURS AND TUFTED PANSIES. LARKSPURS ARE PROBABLY THE BEST HARDY BLUE FLOWERS IN CULTIVATION, AND TUFTED PANSIES ARE BETTER FOR EDGING AND CARPETING THAN ORDINARY PANSIES SINCE THEY REALLY BLOOM FREELY NEARLY ALL SUMMER.

WHAT ENGLAND CAN TEACH US ABOUT GARDENING

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EDITOR OF THE GARDEN MAGAZINE.

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PREFACE

THE objects of this book are as follows:

1. To help toward making America one great garden as England is.

2. To set forth the noblest ideals that England can give us in all the different departments of gardening (such as landscape, formal, wild, water, rock, peat and rose gardening) and contrast these with the less noble ideals which now prevail in America.

3. To show how we waste millions of dollars on material we should never buy and on effects we can never imitate.

4. To discover what the best English effects are and how we can reproduce the spirit of them with long-lived material.

5. To help lay the foundations of an American style of gardening.

This book is intended as a radical departure in the literature of horticulture in purpose, method, and manner. The purpose of Old World gardening books and periodicals is usually to *record* progress — not to *stimulate* it. The purpose of this book is to inspire people to make more and better gardens.

As to method, this work is *comparative* as opposed to *enthusiastic*. It is a common thing for garden writers to gush about flowers. I cannot believe that sentimentality and fine writing help much toward more and better gardens. I believe it is helpful to find out what effects are best and how to get them. One reason why English books, as a rule, are of so little use to us, is that the Englishman is a *born collector*, while the American *wants results*. I admire the Englishman for liking

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every plant that grows — even the humblest weed, but I think it a pity to wince at any suggestion that one plant is better adapted to a given purpose than another. If hemlock makes a better hedge than Norway spruce, why not say so? Why continue to waste thousands of dollars on a plant that fails to do the job? The Englishman does well to love every plant separately for its own sake, but the life-blood of science is the comparative method. We have big things to accomplish in America and we want the best there is to be had for every purpose.

As to manner — my pen falters at dedicating to so finished a literary man as Moses Coit Tyler a book that would probably seem to him the negation of everything literary. I have used slang, which he abhorred, and I have written like one business man to another, instead of following the classical models that I studied in college. But this is an age of "new faces, other minds." It is an age of "big business," and the big things in gardening are generally done by successful business men. The wives may plan the gardens, but the husbands usually pay for them, and therefore I address chiefly the men — men who can give and take hard knocks good-naturedly. For you men need some straight-from-the-shoulder blows. You do not love gardening enough. You gag at the cost. And you do not employ the best advisers. You may be good buyers of bonds, but not of plants. You can cut the price, but you can't get the best results that way. What you need is to *study the subject matter* of gardening, which is quite as important and interesting as sport.

The plain truth is that we can never get an American style of gardening until we get new kinds of books and periodicals. The Old World models will not do. This is clearest in the case of the magazines. The commonest type in England is the penny

weekly, which is not subscribed for, but bought from news-stands. These weeklies contain little that would help our beginners. They are full of news of shows and prizes, accounts of meetings, descriptions of new and rare plants, abstracts of bulletins and papers, notes of travel, letters from foreign correspondents, reviews of genera in alphabetic order, plants named for beginners, descriptions of nurseries and estates, short letters from gardeners, and obituaries. All these items are respectable and eventually we shall get to them, but at the present time no American periodical could live a year which fed its customers on such small fare. We need heartier food. The scrap-book of short articles is all well enough, but we also want long articles about the most important subjects.

So too with books. It is not merely the difference in climate; the Old World models won't do. The English are far ahead of us in books by skilled amateurs who describe their own gardens, but too often they are content with the dry husks of history, especially family history, and with heaping alphabets upon alphabets. But the one blight which I dread most is the habit of *assuming that the reader knows it all.* No other attitude is considered polite. Therefore all facts and instructions must be imparted indirectly and casually. We want to know just how to grow everything worth while. We like our garden writers to assume that we know nothing or have forgotten, and want to know all about it in the quickest time. Our best writers will follow the national instinct for picking at the biggest jobs and hitting them hardest. The new American horticultural literature must have simplicity, directness and force, or it will be merely parasitic upon the trade.

Another feature of this book that may seem unconventional

is the citation of current American periodicals, which may look to some like advertising. But Darwin cited the *Gardeners' Chronicle*, and the reader may rest assured that periodicals could not live a day if they had to depend on recommendations made in books. The object of these citations is to help students — men and women who can build better than I. At the end of each chapter I have cited the best books on each special subject, but with the exception of Downing's "Landscape Gardening," Olmsted's scattered writings, Charles Eliot, Bailey's "Cyclopedia of American Horticulture," and Blanchan's "American Flower Garden," we have few books that have contributed much toward an American style of gardening. And the bulk of all these is small compared with the bulk of the magazines which give thousands of pictures of American effects. The great landscape gardeners of the future must, during their training days, pore over the old files of *Garden and Forest*, *Country Life in America*, *The Garden Magazine*, etc.

The books that seem to be most popular in England are arranged alphabetically. The books that will help Americans most are those which are arranged logically, by natural subjects. The alphabetical method is absolutely necessary in indexes, but nowhere else. We shall not get along very fast or far if our books all begin with Aaron's Beard, and Abele. The alphabetical method of compiling books is a sign of an old and finished country. New countries need books that are brimming with new ideas, for the ideas must first be invented, then fight, and survive or perish according to the law of fitness. And if nine out of ten new ideas fail, we should not worry about the nine, but be thankful for the one new idea that succeeds.

I have been compelled to use the first personal pronoun

oftener than I should like. Whenever possible, a different phrase has been used. But an author is morally bound to distinguish between *fact* and *opinion*. "One of the greatest curses of modern literature," says a prominent professor of history, "is that authors do not discriminate between what they *know* and what they *think*." Gardening is not an exact science, and the building of a new style of gardening is necessarily experimental, so that questions of taste, opinion, and ideals continually recur. Moreover, in all scientific work an investigator is morally bound to tell where and how he got his facts and opinions. Therefore this book is peppered with names of places visited, not from any paltry desire to seem well travelled (for those who come after me will find that I saw very little of England) but because it is the only way of "making types" and indicating standards. For example, the botanist writes "type" on the herbarium specimen from which he describes a new species. The garden writer ought to do likewise. It is not enough to say "the noblest idea connected with water gardening is the naturalizing of water-lilies." He ought to add, "as I saw it at Gravetye." In other words, I would rather be thought immodest than dishonest.

As to the shortcomings of this work, no one can be more painfully conscious than I. Doubtless there are errors of fact and opinion. And there is plenty more to learn from England. Some keen American students ought to go to England to study and report on the autumn and winter beauties, the hedges, the annuals, the fruits, vegetables, garden accessories, societies, and many other features not treated in this work. I have never been to the Pacific coast, and though born in the South I have travelled little there.

Moreover, no one man can create a national style in archi-

tecture or gardening. Heretofore, a national style has developed slowly and casually. But I believe the happy day could be hastened by a sort of *horticultural survey* of America. There must be some garden photographer who is as divinely ordained for such work as Jowett was to translate Plato, or Curtis to portray disappearing types of Indian. Such a man, with a good motor-car and travelling library, could spend a month in a limestone district, for example, and show what are the chief lime-lovers and lime-haters among trees, shrubs, vines, etc. Such a man might discover in five or ten years facts that would save us millions of dollars and several centuries on the long road we must travel before America can be as lovely as England.

For the idea of this book and the chance to realize it I am indebted to Mr. F. N. Doubleday.

Since these chapters appeared in *Country Life in America* and *The Garden Magazine* they have been revised and considerably enlarged. In concluding these essays on what England can teach us about gardening, I wish to thank the many readers who have written me words of encouragement from all parts of the country. I had expected that my view-point would be unpopular. Certainly it cannot please either Anglophobes or Anglomaniacs. But evidently there are many Americans who agree with me that we are wasting millions of dollars every year in the literal imitation of English gardening ideas that are wholly unsuited to our climate and ways of life, and that the noblest lesson English gardens can teach us is this: *Let every country use chiefly its own native trees, shrubs, vines and other permanent material, and let the style of gardening grow naturally out of necessity, the soil and the new conditions.* When we stop imitating and do this, America will soon find herself.

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PART I

WHAT ENGLAND CAN TEACH US ABOUT THE DIFFERENT STYLES OF GARDENING

NOBLE AND IGNOBLE IDEALS IN LANDSCAPE, FORMAL, WILD, WATER, ROCK, WALL, PEAT, ROSE AND INDOOR GARDENING; ALSO HARDY BORDERS, COLLECTING, MAKING NEW VARIETIES, AND GARDEN CITIES

LANDSCAPE GARDENING

CHAPTER I

LANDSCAPE GARDENING

Why England is called "the most beautiful country in the world"—How we imitate her wrongly, and the only way we can surpass her

AN AMERICAN'S first day in England, especially if he arrive in spring, is one of mingled rapture and despair. He is intoxicated with the architecture, the history, and the landscape. And if he be honest, all his defiant patriotism melts and runs away. For in his guilty heart he knows that we have not "found ourselves." He understands now why people accuse us of having no "American style" in architecture, in gardening, or in anything else. The charm of English scenery is explained; it is a revelation of national character.

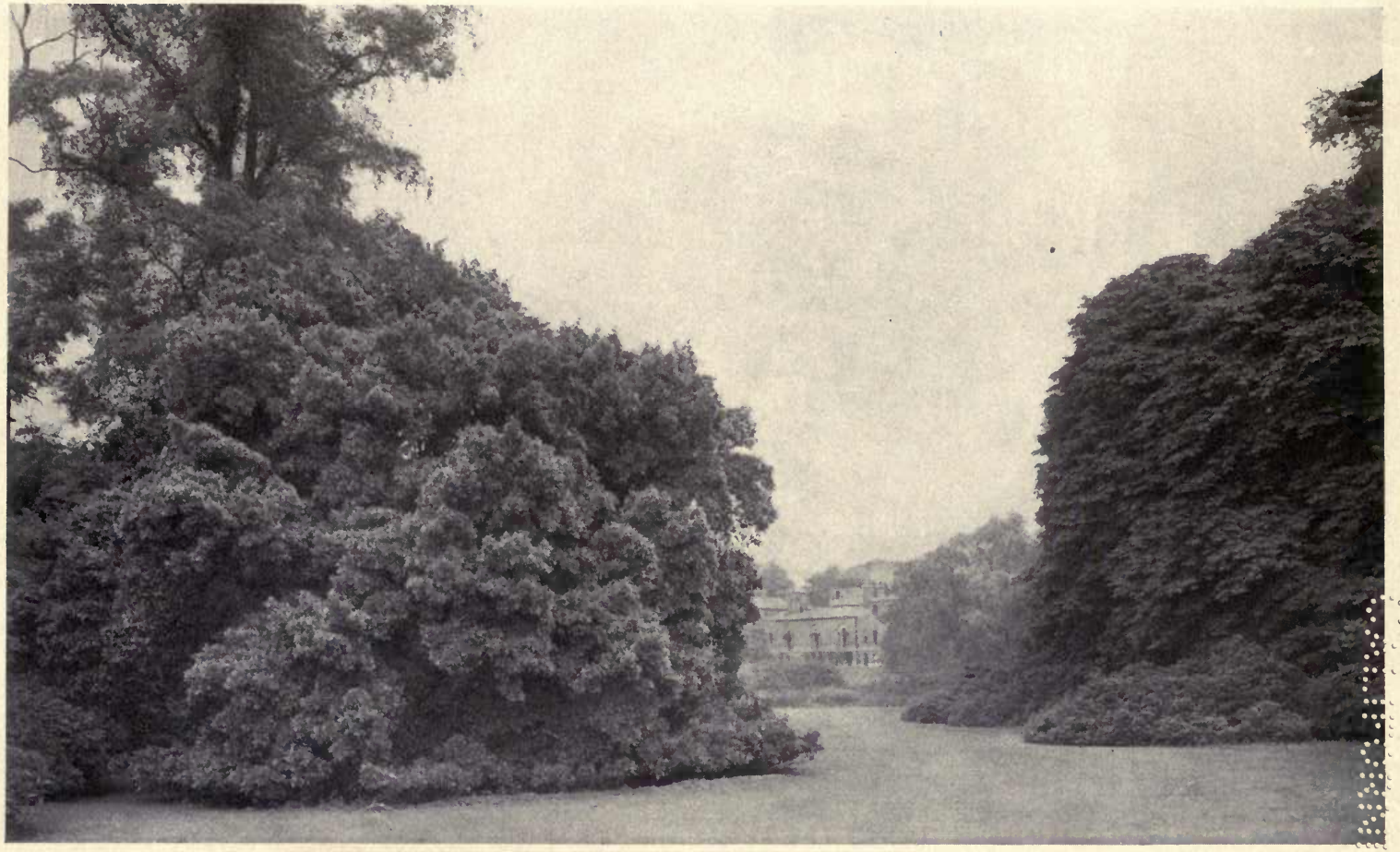
After my first ride into the country around Plymouth I threw myself down in despair. I was gorged with the beauty of it. "What is the use of trying to describe it?" I exclaimed. "We can never have such beauty. Even if we wait a thousand years we can never equal England, for we do not have the English climate."

Then I thought of the millions of dollars we have spent in vain attempts to get English effects—what we have paid merely for roses, which do not bloom all summer with us as they do in England. I thought of all the precious things we can never have in the North, such as English holly and English ivy, the splendour of which had sunk deeply into my soul. I recalled our straight streets, wooden houses, jig-saw ornaments, and gaudy paint. I

contrasted the English hawthorn hedge with the American barbed-wire fence, and I was ready to take the next boat home, hopelessly discouraged.

But I dared not go back and hand out the cold comfort which every Englishman offers us: "America will be quite as beautiful a thousand years hence, but in a wholly different way." For one thing we "can't wait." Again, it is only human nature to crave what the English have. For instance, in the depths of my despair I chanced to look out of the window. There stood a cedar of Lebanon glowing with a mellow splendour, like a prophet that has a message for the ages. It seemed as if I must have a cedar of Lebanon for my suburban home at Elizabeth, N. J. Nothing else in the whole wide world would do.

But during the next week there gradually dawned a great light. I remembered how Professor Sargent had found a cedar of Lebanon that will grow in New England. I saw that English yew has its counterpart in the Japanese yew, which thrives with us. I stood before the hundred-foot specimens of California redwood in England and exulted, because I knew that our native hemlock will give practically the same effect. And so I went about England finding out what we can grow that looks like the English material—except to a dry-as-dust botanist. In two months I discovered how we can reproduce practically all the important English effects with native or Japanese material which will be long-lived in America. The details are given chiefly in the second part of this book; the gist of that story, however, I can give here in two sentences: *We have failed to get English effects because we have used European material. We can get many of the English effects by using equivalents from America and the Far East* (Japan, China, and Korea), and we can save a million dollars a



IF ENGLAND IS REALLY THE MOST BEAUTIFUL COUNTRY IT IS BECAUSE THERE ONLY DOES LANDSCAPE — NOT FORMAL — GARDENING PREDOMINATE. THE SOUL OF LANDSCAPE GARDENING IS THE OPEN CENTRAL LAWN, FLANKED BY TREES. ENGLAND EXCELS AMERICA IN LUXURIANCE AND FINISH. *See page 6*

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year* if we want to, by planting long-lived† instead of short-lived material.

But I soon found something vastly more important — *viz.*: that the old attitude which makes *age* and *climate* insuperable obstacles to progress can be swept aside. Age is not valuable for itself, but only for what it can give. Ask yourself, "What is the most precious thing that the centuries can bestow?" Is it not that serenity of spirit of which mellowness, atmosphere, personality, self-restraint, and repose are merely phases? I grant you that America as a whole may have to wait eight or ten centuries to become as mellow as England, but that is not a practical question which concerns you and me. The important thing is to find out how each one of us can secure mellowness for his home grounds without waiting even one lifetime. And I boldly assert that *any one can get 90 per cent. of all the mellowness that age can give, and this, too, in only five years*, provided, of course, that the individual has a cultured personality or enough hard sense to follow implicitly the advice of a first-class landscape gardener who really knows the facts. If you want to see proof of this with your own eyes drive past the home of Mr. Thomas Hitchcock, Jr., at Westbury, or of Mr. John L. Lawrence, at Lawrence, L. I. (See plate 3.)

How can we get such luxuriance? One way is to transplant big trees — not many; perhaps two will be enough to frame the picture every beautiful house should make. Another way is to bank some extra large shrubs about the front porch and near the

* We waste this much on "Dutch stuff" alone. I mean the evergreens, deciduous trees and shrubs which we import by the thousand from Holland and Belgium. That black Dutch soil never amalgamates with American soil. These trees and shrubs are really forced into an unnatural growth, because the water is only eighteen inches below the surface in some of those Dutch nurseries. Dutch stuff always looks best to the buyer, and is so much cheaper that a beginner cannot resist it, but it is likely to die after the first winter. For full details, see *Country Life in America* for May, 1908, pages 48 to 52.

† For example, red pine instead of Scotch pine, hedges of Japanese yew instead of English yew, the Colorado form of Douglas spruce instead of the Californian, Oriental spruce instead of Norway, the Colorado white fir instead of the silver fir.

corners. Do you realize that even the small bushes of ordinary nursery size reach their full height in four or five years? And the best way of all to attain mellowness is to use rampant vines, for trees can only hide ugliness, but climbers can transform it into beauty.

So, too, with that other bugaboo — climate. Ask yourself, "What is the most precious thing that climate can give to the landscape? Is it this or that plant, or is it *luxuriance?*" Perhaps you would rather reply, "Trees a thousand years old," or "The exquisite finish of the English landscape and gardens." But if you will analyze both ideas you will find the root-idea is luxuriance. For if we plant the right kind of trees they will last a thousand years. Redwood has lasted that long in California and I dare say white oak in the North and live oak in the South.

Therefore, I lay down this bold challenge: *We can get 90 per cent. of the English luxuriance in our own lifetime by planting our longest-lived native trees and shrubs.* And if you don't believe it visit the estate of Professor Charles Sprague Sargent at Brookline, Mass.

Again, the exquisite *finish* of the English landscape is largely due to the extraordinary luxuriance of the grasses and wild flowers that cover every foot of the banks that line the roadsides. But we can get this same finish in our gardens, if not along the roadsides, largely by using edging plants to make a connection between the greenery of the grass and that of the trees. (See plate I and Chapter XXII.) For this purpose we need low-growing shrubs such as *Deutzia gracilis*, the Indian currant, *Spiræa Van Houttei* and Japanese barberry. Also we should carpet every foot of the ground with shallow-rooting plants that will give us another crop

WE CAN ATTAIN THE ENGLISH LUXURIANCE ONLY BY MAKING OUR NATIVE TREES DOMINANT; THEIR FINISH BY USING EDGING PLANTS. *See page 6*

of flowers instead of bare earth or unsightly manure. These ideas are illustrated by the picture of bunchberry on plate 5 and by Chapter XXII.

I will give you two examples of luxuriance and finish already attained in America in five years or less chiefly by transplanting large trees. First the Long Island home pictured on plate 3. A man who drove by this house when the place looked just as it did in the picture asked how long the house had been there. When told that the whole place was *four years old*, he replied, "You must be mistaken. It's forty if it's a day." I do not assert that this is a perfect place, but I do claim that it has at least 90 per cent. of the English luxuriance, while most Americans who have been to England believe we cannot get even 50 per cent. And as to finish, I have yet to see in England any greater perfection of detail than you can find in the formal garden of Mr. Larz Anderson at Brookline, Mass., which was fully described and pictured in *Country Life in America* for March, 1905, and again in March, 1906.

If, as individuals, we can get so much of the English luxuriance and finish in only five years, why worry about the other 10 per cent.? Those last ten degrees before perfection are very precious, but there is such a thing as paying too high a price for beauty. I saw an Englishwoman putting the finishing touches on a perfect garden for thirty-six cents a day. Would you have American labour paid like British labour? Would you be willing to entail the land in order to have perfect estates? Would you exchange a social democracy for a social aristocracy that the loveliest gardens might be preserved forever?

The only way in which we can surpass England is by loving our own trees, as they do theirs, and by planting more American

than foreign material. The grandest proof of this is the Arnold Arboretum, which fits the New England landscape so perfectly that thousands of people drive through it without suspecting it is a collection of all the hardy trees and shrubs of the world. That is because the native oaks, elm, hawthorn, etc., are the bulk of the landscape material, instead of English oak, elm, and hawthorn, which are not long-lived in America. While we can reproduce nearly all the most important English effects we can never equal England along those lines. She can always excel us on finish; we can always excel her on variety and on autumn colours. We have ten oaks to her one, ten dogwoods, ten viburnums, ten maples, etc. We have been on the wrong track altogether, for we have supposed that the secret of England's loveliness is that she has the best *materials* for gardening, whereas the only fundamental thing England has to teach us is the *spirit* of gardening. This spirit, it seems to me, has three great lessons for us which the nation may take centuries to learn but which we, as individuals, may understand and apply at once.

First, no country can be supremely happy, healthy, and beautiful until *every foot of it is a garden.* We should limit the height of buildings in our cities and bring the country into them. Every home ought to have a garden. In England it is considered a disgrace not to have one. It is impossible to bring up children properly without a garden. We ought to live in our gardens a good part of the time and entertain our friends there, especially for the week-ends.

Second, *landscape gardening is better for the masses than formal gardening.* The object of formal gardening is to exhibit man's mastery over nature; the object of landscape gardening is to make us forget ourselves while contemplating a glorified portrait of

3 SHOWING HOW 90 PER. CENT. OF THE ENGLISH LUXURIANCE HAS BEEN ATTAINED IN AMERICA IN FOUR YEARS BY MOVING A FEW LARGE TREES. ORDINARY SIZED BUSHES HAVE DONE THE REST. MR. JOHN L. LAWRENCE, LAWRENCE, L. I. *See page 5*

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nature. Therefore, landscape gardening is more restful and refreshing, since it makes the greatest contrast to the artificialities of city life. In the ripe judgment of many experienced travellers, England is the most beautiful country in the world. On this point I am not competent to express an opinion, but there can be no question that the distinctive beauty of English country scenery is due to the prevalence of landscape gardening. Formal gardening originated in Italy and was brought to perfection on the Continent. Landscape gardening was created in England and the essence of it is illustrated by plate 1.

Third, *the supreme quality in art is self-restraint.* We overdo everything. We want what we want when we want it. We try to snatch the best of everything in life. We are willing to back our taste against all the architects and landscape gardeners that ever lived. We want a big show right off and our commonest fault is that we scatter showy trees and shrubs all over our home grounds, with the result that they are only museums. Every tree and bush pictured on plate 4 is the kind our newly rich buy in preference to native material. I mean the golden evergreens, the purple-leaved plum and other variegated shrubs, the weeping trees, cut-leaved bushes, and everything that has a strange form or colour. But in this garden of Colonel Holford's, at Tetbury, these horticultural gems are not allowed to ruin the landscape, but are put in a garden by themselves, and they are combined in such a way as to make a picture.

And so — to make a long story short — we should be perfect beings in order to excel the British at this, their own game, or else we should employ perfect landscape gardeners — not mere architects, but men who love our native trees and shrubs and know how to combine them into *home pictures* that are not merely for show

but *inspiring to live with.* In succeeding chapters I hope to show you a better series of pictures of English gardens than any you have ever seen. They were nearly all taken by Mr. E. J. Wallis, who is said to be one of the best garden photographers in England. You will please notice that many of the most "English" effects are produced by *American* plants. And *except where the contrary is stated beneath a picture, every garden effect pictured in this book we can reproduce in America.*

And to paint these home pictures we need chiefly *American material.* We must face this deadly parallel:

WHAT WE REALLY PLANT	WHAT WE OUGHT TO PLANT
70% European trees and shrubs and horticultural varieties	70% American trees and shrubs, *i. e.*, native to America
20% Chinese and Japanese	20% Chinese and Japanese
10% American	10% European and horticultural

FORMAL GARDENS

CHAPTER II

FORMAL GARDENS

Why Americans lavish fabulous sums upon "Italian" gardens, and are usually disappointed with the results — A simple, orderly process by which perfection may be attained

TO MOST Americans "formal garden" and "Italian garden" are synonymous. But there are many types of formal gardening, and not all of them can be seen in Italy. England possesses perfect examples of every kind, and she has also developed a style of formal gardening which is better adapted to the American climate and social conditions than the prevailing Italian style. The Continental styles of formal gardening are too often severe, quasi-public, cold as marble. The best English formal gardens have dignity enough, but they are eloquent of intimate home feeling and gay with flowers.

Nothing is easier than to write a graceful, entertaining essay about formal gardening that will be of no real service to anybody. Mere "art talk" and descriptions of famous places give little help. True, no one can crowd all the art and practice of garden design into a single chapter. But in this chapter I hope to explain why Americans lavish fabulous sums upon formal gardens and why they are usually unhappy over the results. Also I shall set forth a simple, orderly process by which, I believe, any one who can afford a formal garden may have a perfect one.

The reason why many people are willing to "spare no expense" provided they can get an exquisite formal garden is simply

this: We all feel instinctively that the supreme test of any garden is personality, and that in the formal garden personality finds its highest expression. Landscape gardening alone can never wholly satisfy man's soul. There must be design. I do not mean to say that landscape gardening lacks design, but in the natural style the design may slowly unfold, while in formal gardening it must instantly appear. And mere perfection of design is not enough, for any one can tell on entering a garden whether it reflects the personality of the landscape gardener or of the man who lives there. *The artist's work can only show man's mastery over nature; the owner's may express his mastery over himself.*

The other side of this truth explains why most formal gardens in America are a failure. The real trouble with them is that they are characterized by *self-indulgence*. We insist on having everything we want. We crowd in every good thing we have seen in our travels. We back our own taste against all the architects and landscape men, and then we wonder what is lacking and why people laugh behind our backs. Everybody else can see clearly enough what the matter is. It is lack of self-restraint. That very quality explains why English formal gardens are more charming than those of America. One can hardly travel two months in England without perceiving that the dominant trait of British character is self-restraint, while self-indulgence is with us a conspicuous national failing. This is a hard, unpleasant thing to say, but please do not call me an Anglomaniac. I love my own country and would not live in England. Rather ask yourself if it is not true — true in food, drink, clothing, amusements, and all material things. It is only a passing trait, I believe, but I am also confident that it is the only fundamental cause of our failures in formal

4 A WATER GARDEN SURROUNDED BY HORTICULTURAL "SPICE." IN AMERICA WE SCATTER THESE CONSPICUOUS OBJECTS ALL OVER THE PLACE INSTEAD OF COMBINING THEM SO AS TO MAKE A PICTURE. WESTONBIRT, COLONEL HOLFORD'S ESTATE AT TETBURY, GLOUCESTERSHIRE

See page 9

gardening, while the causes which we all urge to one another are merely superficial and deceive no one but ourselves.

One of the excuses we all make is that "the plants die," and we blame this on *climate*. The chief reason why plants die is that we buy "Dutch stuff," simply because it is "cheapest." There is no fault of character here. Most Americans do not know they are buying Dutch trees, shrubs, and evergreens. They mean to buy hardy material, and are heart-broken when it dies after a winter or two. The Dutch plants always look best, and how shall an innocent investor be on his guard? Apparently there is no way. He must try and lose before he is willing to pay a fair price for American-grown material. But the important point is this: Our climate is not to blame. We can get 90 per cent. of English luxuriance anywhere in America. Proof of this will be found in every chapter of this book.

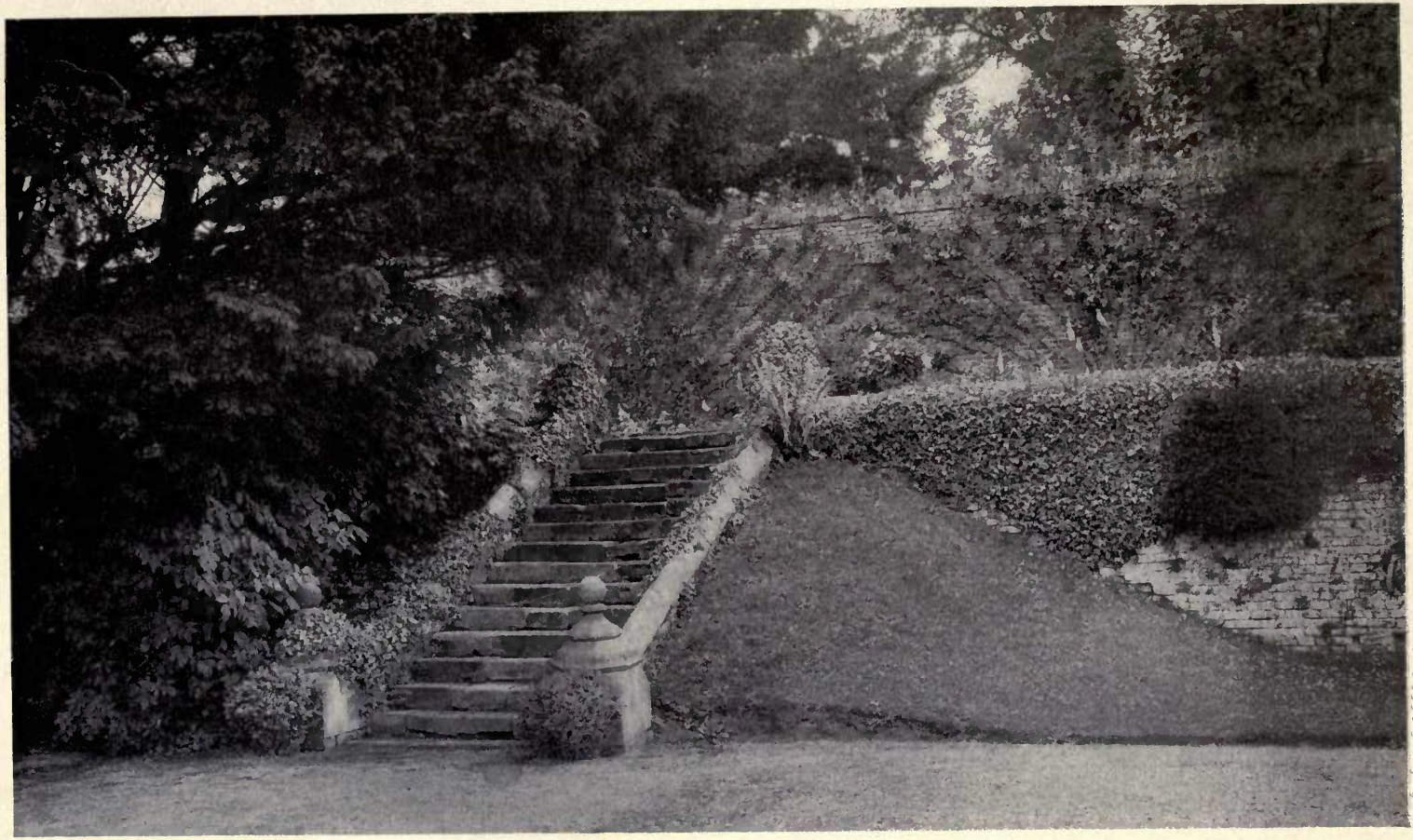
But the final excuse we all make when driven into a corner is *age*. Yet we can get 90 per cent. of all the mellowness that age alone can give in four years or less, simply by planting a few big trees, shrubs, and vines. This is costly, but it is the only satisfactory method for people who "can't wait." The other method — planting fast-growing species — is sure to be a sorrow in the end. And there are age-effects particularly appropriate to formal gardens that can be had the first year. For instance, look at plate 6 facing page 16. Can you detect any newness in that garden? Yet the stone-work at the bottom of those steps is all new. If I remember rightly it had not been made a year. In order to make it look old the gardener deliberately planted those two bushes in front of the stone posts. Has he not succeeded? He does this sort of thing regularly whenever old masonry crumbles and repairs are necessary. Any one can soften architecture in this way.

You can even get that ivy effect in one year. There are nurseries where one can buy ivies and forty other vines as long as those in the picture. In every chapter in Part I, I shall show a different and appropriate way of getting the effect of age in four years or less.

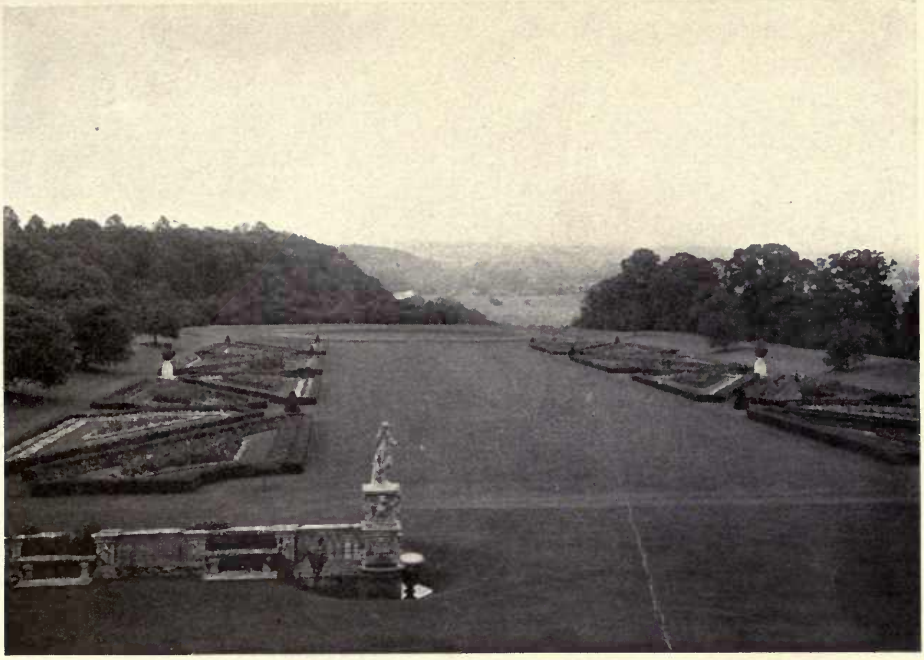
Since, then, the real difficulty is within ourselves, and not in outside things, let us see if there is not a *right and wrong spirit*, and a right and wrong method. Too often the aim of our formal gardens is show, and that is why people dispense with a high enclosure. Our aim should be an intimate revelation of a beautiful home life; but this demands privacy, and privacy is impossible without walls or hedges. One has only to look at these English pictures and think away the enclosures to see that this is so. Moreover, the enclosure must be formal; an irregular one will not do. A formal garden surrounded by wild woods does not look well, because the contrast is too abrupt. The mind demands some transition between architecture and nature. The line must be drawn where man's work ends. Every time we try to impose formal ideas upon the landscape we are sure to fail. A ridiculous example of this is shown in the lower picture on plate 7. How absurd are those small columnar evergreens — in this case Irish yews. How trifling in comparison with the cedar of Lebanon! How much better the picture would be without them! Yet we are forever making artificial vistas and keeping them trim at great expense. Compare now the picture on the top of plate 7. Here we have all that wealth, age, and climate can give, but still something is wrong. The trouble is that this formal garden has no bounds. It goes beyond its proper place and tries to dominate the whole landscape. That is like Canute commanding the sea to roll back. One feels instinctively that to show man's mastery

WE HAVE TO GO TO ENGLAND TO SEE OUR OWN PLANTS LOVED AND USED INTELLIGENTLY.
BUNCHBERRY (*Cornus Canadensis*). *See page 7*

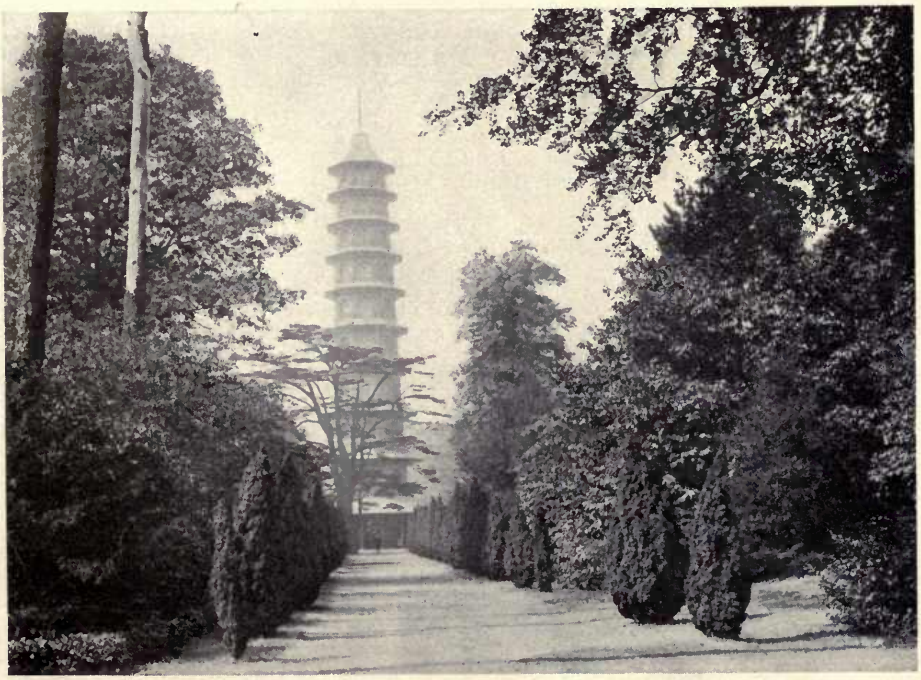
TO GET THE ENGLISH GROVE EFFECT WE HAVE ONLY TO CUT OUT THE CROOKED AND SHORT-LIVED TREES AND LET THE REST DEVELOP. WE MUST GET OVER THE SENTIMENTAL NOTION THAT THE AXE SHOULD NEVER BE USED. *See pages 56 and 185*



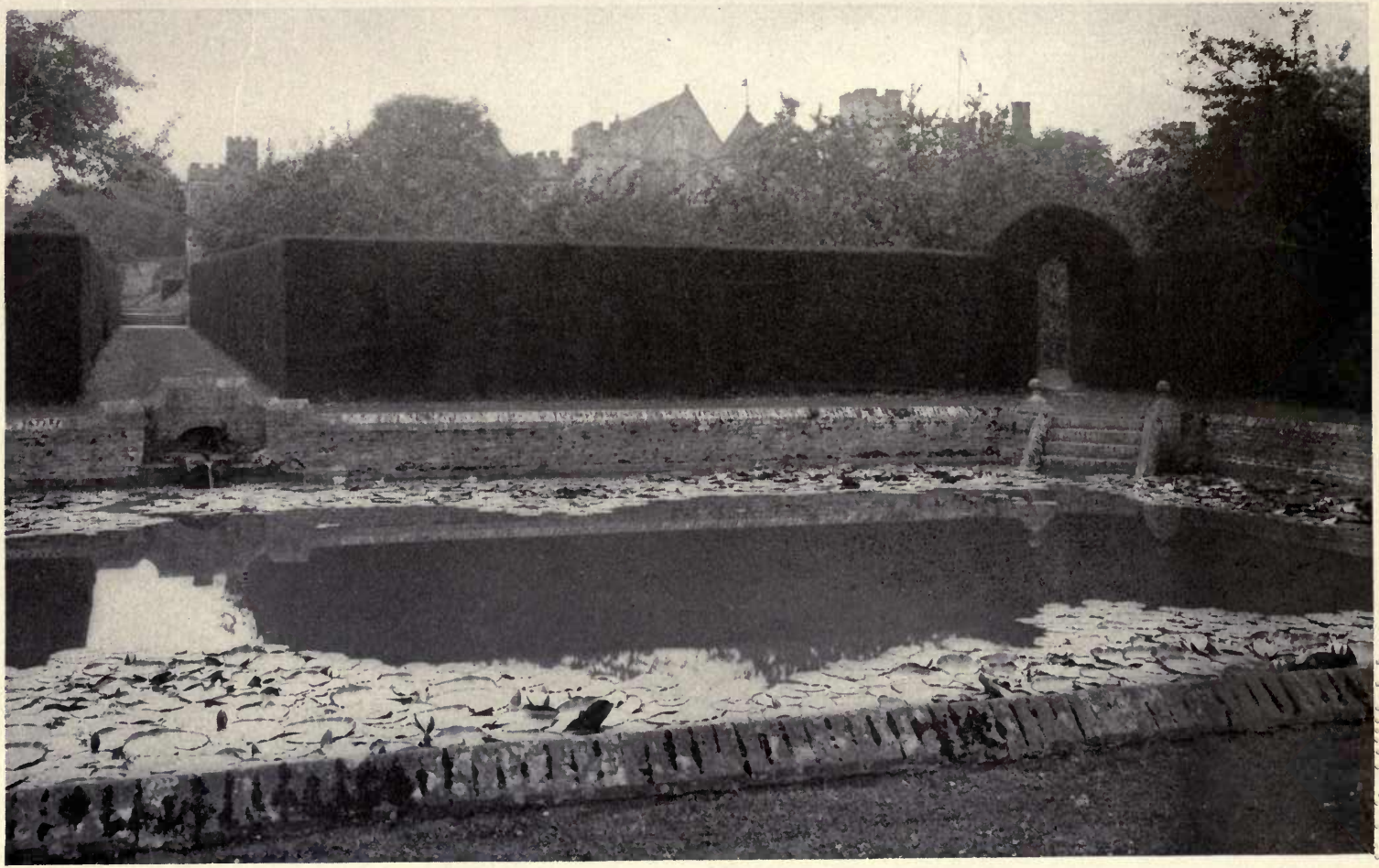
6 CAN YOU DETECT ANY NEWNESS IN THIS GARDEN? SOME OF THIS IS ONLY ONE YEAR OLD. HOW THE EFFECT OF AGE WAS SECURED IN THIS FORMAL GARDEN IS EXPLAINED ON PAGE 15 (PENSHURST).



HERE WE HAVE ALL THAT WEALTH, AGE, AND CLIMATE CAN GIVE, BUT SOMETHING IS WRONG. *See page 16*



"EVERY TIME WE TRY TO IMPOSE FORMAL IDEAS UPON THE LANDSCAPE WE FAIL." THE FORMAL GARDEN BELONGS INSIDE A HIGH WALL OR HEDGE. *See page 16*



8 SHALL WATER BE DOMINANT? YES, IF IT IS PLENTIFUL AND CHEAP. NO, IF IT MUST BE TURNED OFF FOR ECONOMY. DIANA'S POOL, PENSHURST. *See page 18*

over nature is only evading the real problem, *viz.*, man's mastery over himself.

If, then, we know the proper spirit, what is the proper *method?* I believe it is impossible to have a perfect formal garden without expert advice. Yet if the expert has everything his own way the result is likely to be cold and painful. How, then, can a man put his personality into a garden, especially when he knows nothing of design or of plant growth? The only way is deliberately to deny himself something, for the surest way to spoil a garden is by creating the impression of unbridled desire. Some of our pet ideas must be subordinated, others omitted. For every great work of art must have some one dominant idea. And now, at last, comes the method I spoke of. For the important thing is to recognize that there are about a dozen types of formal garden, each characterized by its dominant idea; that the wrong way for a man to put the best of his personality into a garden is to try to combine the good features of all, and *the only right way is to study the relative merits of these different types of garden until he knows which best fits his own home life.*

Shall *architecture* be dominant? Yes, if the house be beautiful and enduring, and if the formal gardening is to be confined to the immediate surroundings of the house. No, if what one really needs is a separate formal garden where one may shut out the world and think. The Italian garden that is without flowers is too cold, hard, foreign, and pretentious for a democratic country.

Shall *statuary* be dominant? Yes, if confined to your one exquisite piece which perfectly expresses your ideal of character or achievement. No, if it is a mere foreign antique having no connection with your real life. We make too many collections of statuary that only serve to remind visitors of Fourth Avenue

shops and the fat commissions of architects who let us buy all we want.

Shall a *foreign or amusing idea* be dominant? Shall we have an Italian, Dutch, or Japanese garden, or a maze, a grotto, or a floral clock? A foreign style can never be perfectly reproduced, and it is only a thing to admire. It is not a comfort and inspiration in hours of trial. The amusing garden also is only for momentary pleasure. Our serious task is to study our own national life and to contribute what we can toward an American style of architecture and gardening.

Shall an *historical idea* be dominant? (See plate 9.) Yes, if it really belongs to our family life. No, if it is a mere affectation. An old Dutch family in New York may have a Dutch garden, but is a mere trip to Holland or a sentimental interest in it a sufficient excuse? Of course, it is a duty to preserve gardens that have a history, even though they belong to forgotten styles of art. We have no more right to make them over than to paint a new picture upon a canvas that already records a stage in the history of painting. What if the old garden is stiff and artificial? It is a good thing to escape from one's century occasionally.

Shall *water* be a dominant feature? Yes, if it is plentiful and cheap. No, if in any way it suggests great expense. By all means have the sound of running water if you can afford to let it run, but if you can afford only a mere trickle, make the water feature subordinate. Rather the simple dignity of "Diana's Pool" (shown on plate 8), than an electric fountain that will give your week-end house parties a new sensation.

Shall *vegetation* be the dominant idea? Yes, always in a secluded formal garden. The garden dominated by architecture is the deadest of all gardens, because architecture is the least

emancipated of the fine arts. It has more of the material than the others. Stone does not suggest growth; vegetation does; and growth suggests character. A garden without vines is like a house where affection does not dwell. It is impossible to make a garden breathe a warm, tender spirit without luxuriance. (See plate 9.) But I believe we make a great mistake in mixing all the different types of vegetation. Let us consider what type of vegetation shall be dominant.

Shall *trimmed trees* be dominant? (See plate 10.) No. Let Levens Hall preserve its perfect specimens of topiary work, but let us trim no box or other evergreens into geometrical forms or shapes of birds, beasts, or men. The idea is trivial — even grotesque. We may use the simplest forms — globe, pyramid, and column — when there is a good reason, but sparingly. The best reason is to relieve flatness in a garden where flowers are to be dominant. Then your bay trees in tubs are justified, for they give height without harming the flowers by taking away sunlight or food. But a whole garden of trimmed conifers, even one with the simplicity of the Hunnewell garden, is artificial. Trimming is a mean way to show mastery over nature. A nobler way is exemplified by the avenue of yews at Hampton Court, where the trees are natural pyramids — but not too perfect ones. If we need a columnar tree, we should not long for the Italian cypress, but plant our own red cedar — and never trim it.

Shall *bedding plants* be dominant? (See plate 10.) Not in a private place. Leave that style of gardening to public squares in cities. The shearing of coleus and other plants with gaudily coloured foliage is the lowest type of gardening because there is no blossoming — nothing to symbolize the growth and efflorescence of character. A few beds of geraniums, heliotrope, or other

tender flowers may be justifiable, if there is no better way to be sure of having some flowers every day, but to let tropical foreigners dominate a garden is to sacrifice sentiment to show.

Shall *evergreens* be dominant? Yes, if you want a garden that will last through the centuries and symbolize immortality. No, if the nurseryman tempts you to make a collection of blue and golden conifers. There is no abiding dignity in abnormal colours and fantastic forms like those of the retinisporas. There is a wonderful dignity in a garden dominated by box, rhododendron, mountain laurel, yuccas, trailing myrtle, and American holly. It will be a solemn and even monotonous garden at times, but it will also have its times of gorgeousness. Posterity will be inspired by it, for it will be fragrant of immortality.

Shall *comfort* be dominant? Yes, if we really love to live outdoors. But let us not have a summer house if we take tea there but once a year and never go there to read or rest. A pergola is not always a good thing. Isolated, it looks pretentious. Let it go from somewhere to somewhere, *e. g.*, from the house to a resting-place with a good roof. Or let it go around three sides of the garden, as at Mr. Breese's place at Southampton, L. I. But if what we really need is a children's playground, and we can afford only one garden, let us give up the idea of a formal garden and make a really good playground with all the paraphernalia that children need.

Shall *flowers* be dominant? (See plate 11.) Yes, if they are chiefly hardy and perennial. No, if they are chiefly annuals and bedding plants, for the latter speak of ceaseless vigilance and expense where the only suggestion should be gayety or repose. I used to think perfection of detail desirable. Now I know that it makes many American gardens restless. After seeing the

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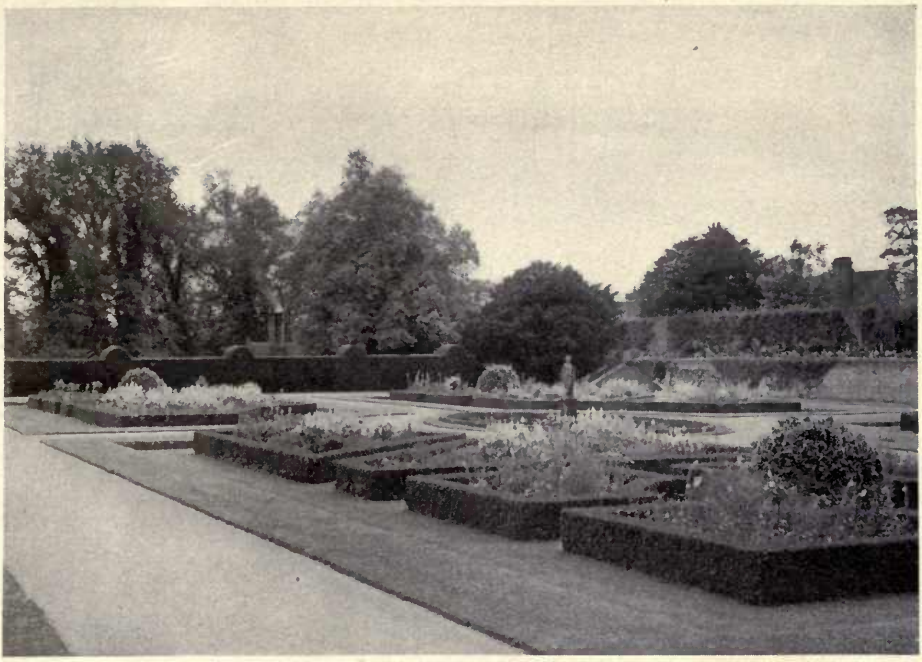
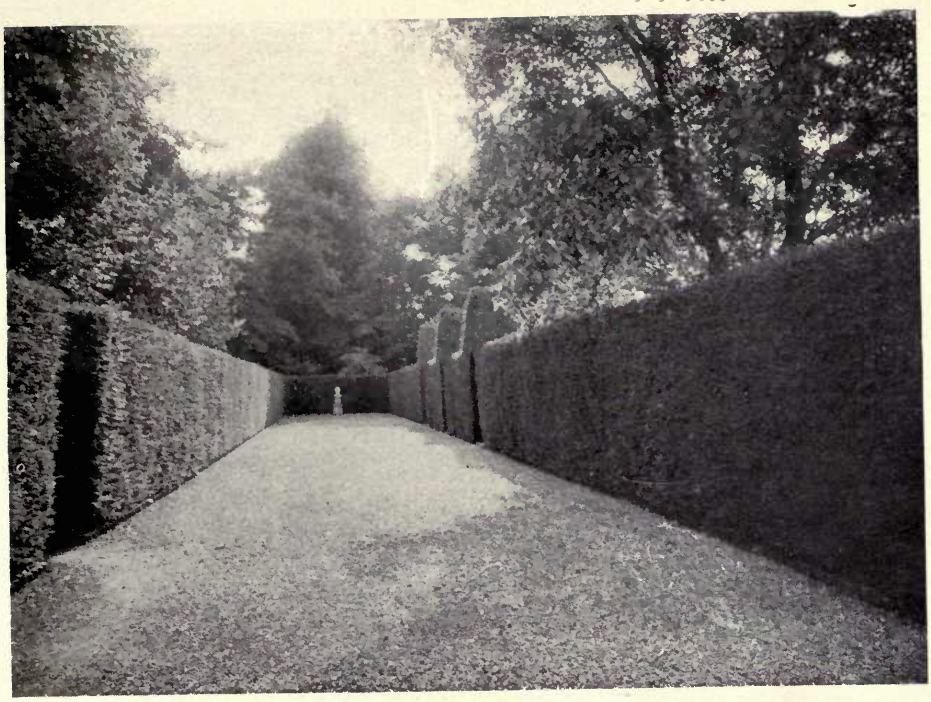
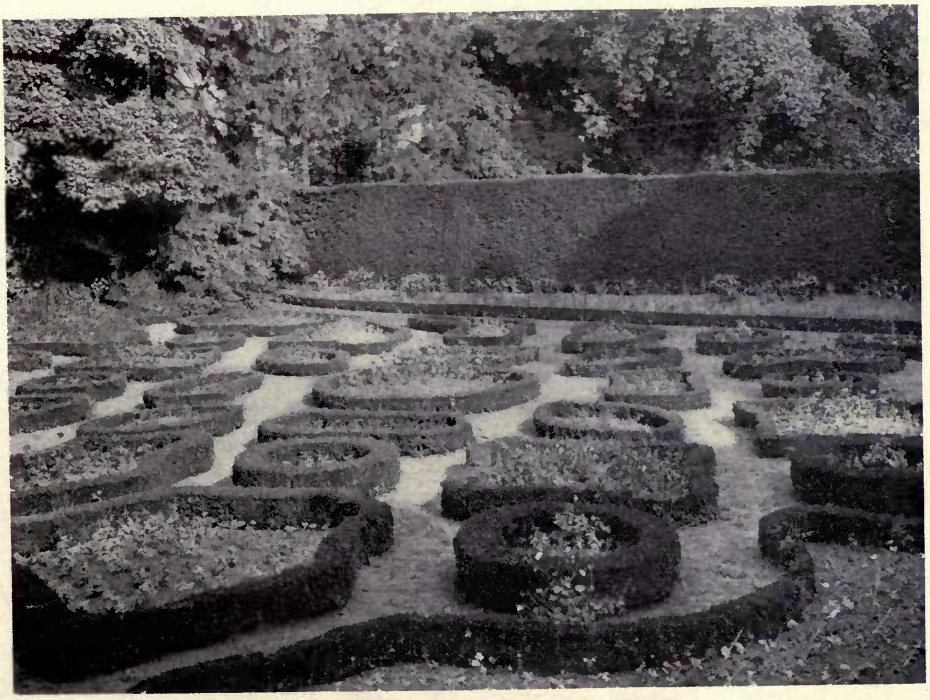


SHALL AN HISTORICAL IDEA BE DOMINANT? YES, IF ONE HAS THE PRIVILEGE OF PRESERVING A GARDEN LIKE THIS, BUT HOW MANY HAVE? PENSHURST. *See page 18*

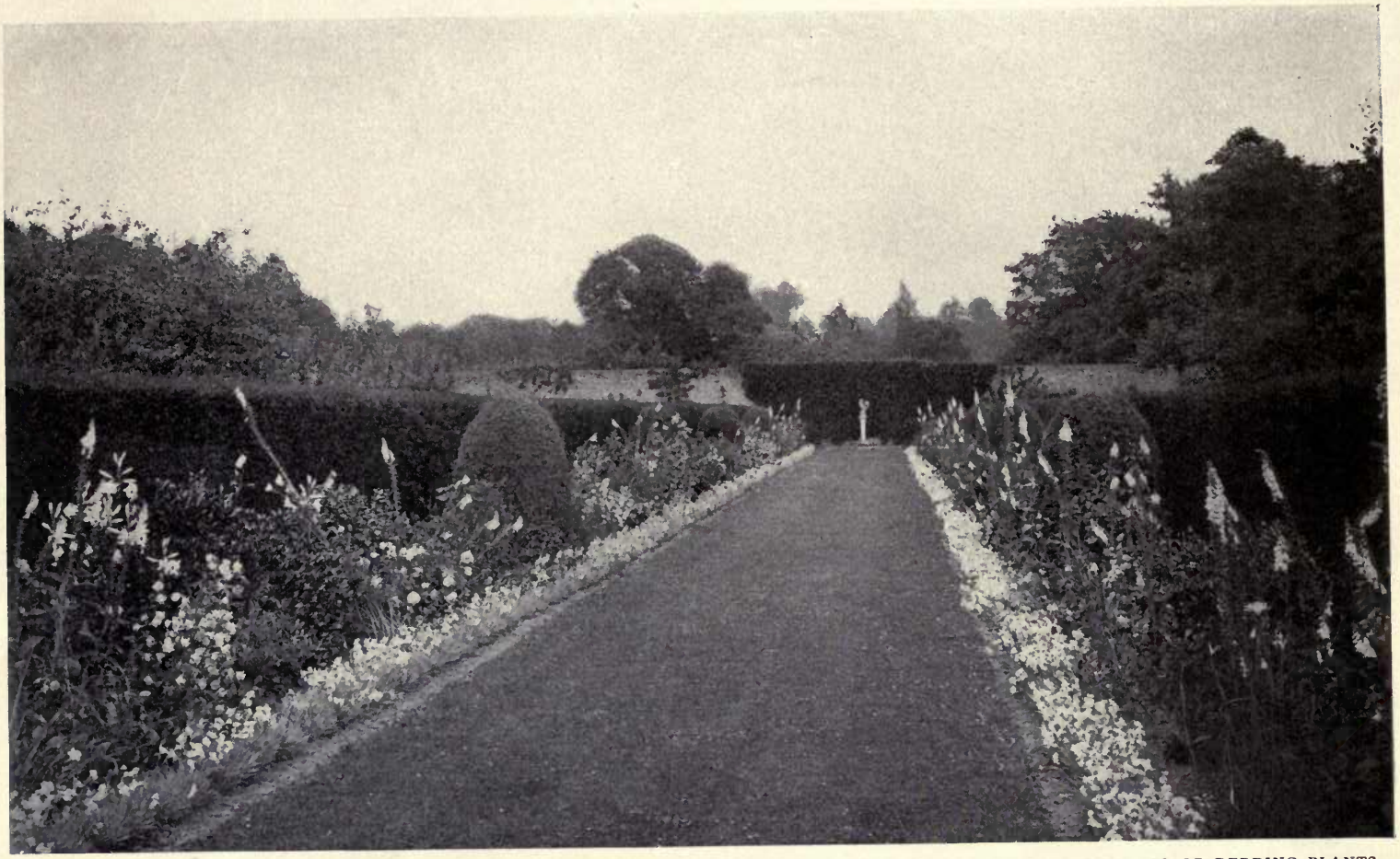
SHALL VEGETATION BE DOMINANT? YES, BUT THERE ARE MANY TYPES AND ONLY ONE SHOULD PREVAIL. HERE GREENERY IS THE IDEA. *See page 18*



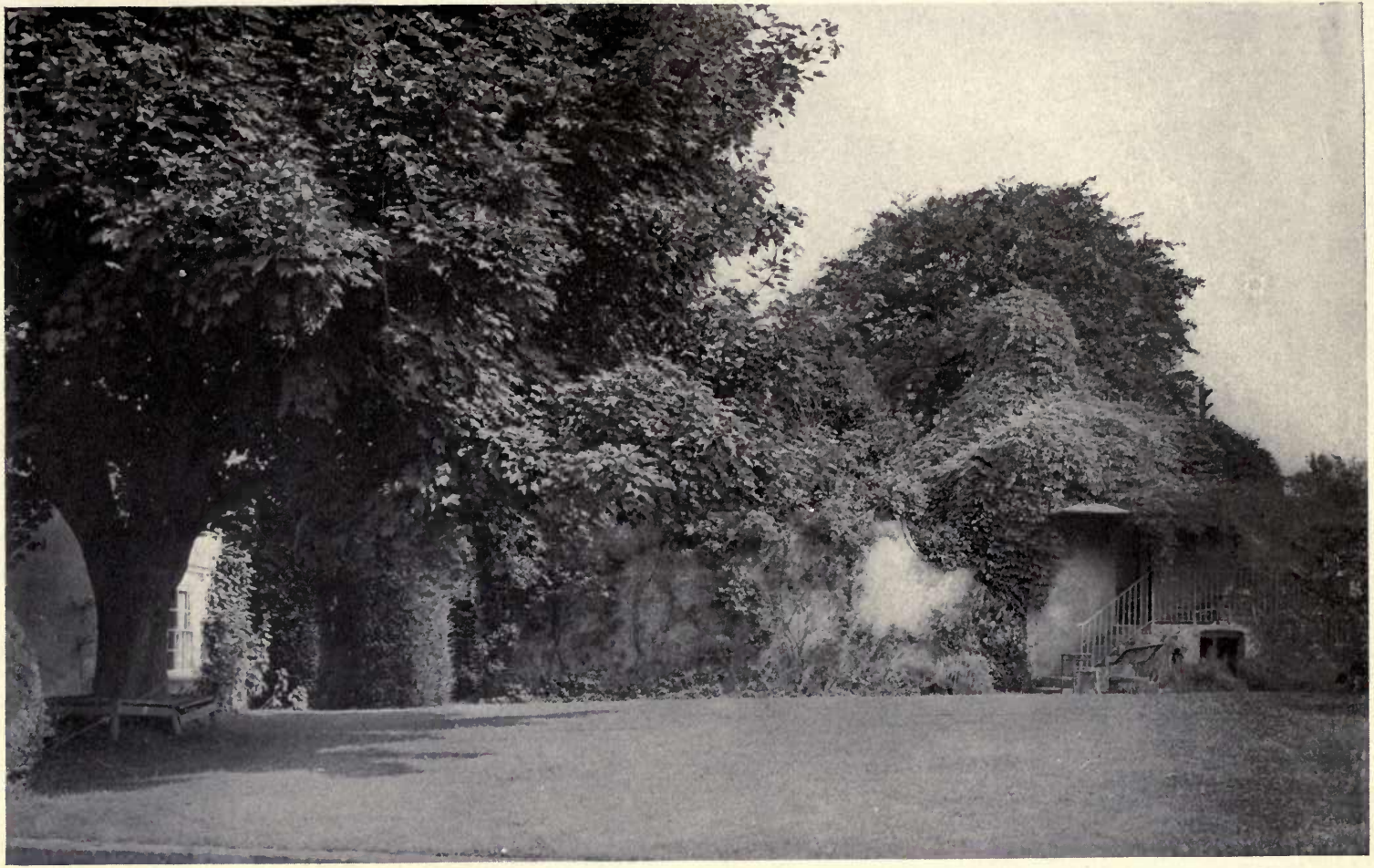
10 SHALL TRIMMED TREES BE DOMINANT? TOPIARY WORK IS GROTESQUE; EVEN SIMPLE FORMS BECOME MONOTONOUS. IT IS A MEAN WAY TO SHOW MASTERY OVER NATURE. AN OLD TIME WINTER WALK. WOULD NOT A COLLECTION OF TREES AND SHRUBS WITH BRIGHTLY COLOURED TWIGS OR BERRIES BE MORE INVITING AND CHEERFUL? *See page 19*



SHALL BEDDING PLANTS BE DOMINANT IN A FORMAL GARDEN? THEY REPRESENT THE LOWEST TYPE OF GARDENING. *See page 19*



SHALL FLOWERS BE DOMINANT? YES, IF THEY ARE CHIEFLY HARDY AND PERENNIAL. NO, IF THEY ARE ALL ANNUALS OR BEDDING PLANTS (PENSHURST) *See page 29*



12 THE STUDIO WHERE ALFRED PARSONS PAINTS MANY OF HIS BRILLIANT GARDEN PICTURES. IN THE GARDEN OF FRANCIS DAVID MILLET, THE WELL-KNOWN AMERICAN ARTIST WHO LIVES AT BROADWAY, WORCESTERSHIRE. THE VINE IS OUR OWN VIRGINIA CREEPER. THE FIRST ESSENTIAL TO THE HAPPIEST OUTDOOR LIFE — PRIVACY. *See page 92*

careless grace with which Penshurst and dozens of other English gardens bear their honours, I believe that perfection of detail is undesirable. For it inevitably suggests straining after effect. True perfection in flower gardening is characterized by a gay and buoyant spirit. The formal garden dominated by flowers is the type that England has perfected. It is the cheeriest and most home-like of all. Another name for it is Colonial. A perfect modern example of it is Mr. Larz Anderson's garden at Brookline, Mass. If we ever develop an American formal garden, I believe it will be along these lines.

I have seen only one other large garden that seems to me to have made important contributions toward an American style of formal garden. That is Blairsden, at Peapack, N. J., the home of Mr. and Mrs. C. Ledyard Blair. It has the real Italian "garden magic," *i. e.*, the charm that is not dependent upon flowers. And it is not a copy. The real spirit has been transported and actually adapted to American conditions. The main features are a pool and staircase which are illustrated in colour in *Country Life in America* for October, 1910.

To sum up: It is only by going through some such process as this, consciously or unconsciously, that we can put the best of our personality into a formal garden We are sure to put in our worst if we override the designer and the plantsman. For, if we ride over them, we violate the laws of art. These laws are not mere abstractions; they are the crystallized experience of thousands who have lived and done this very thing before us.*

* It is doubtful whether a successful book on "How to Make a Formal Garden" can ever be written, because the principles of design are hard to teach and harder to apply. To the professional designer, the most useful work, possibly, is "The Art of Garden Design in Italy," by H. Inigo Triggs. There is plenty of inspiration, but little practical help in the sumptuous books on Italian gardening by Wharton, Latham, and Elgood. "The Formal Garden in England," by Blomfield, contains many good architectural details. Some American formal gardens are pictured in works of Guy Lowell and L. V. Le Moyne. Loring Underwood has worked out a new type of American back yard in "The Garden and Its Accessories." Alice Morse Earle has pictured in "Old Time Gardens" some of the best Colonial gardens and plants. The most comprehensive classification of "old-fashioned flowers" is in *Country Life in America*, vol. II., pages 511 to 515 (March, 1907), but groups III and IV under "Annuals" should be under "Perennials."

LIVING OUTDOORS

CHAPTER III

LIVING OUTDOORS

How each one of us can get more "fun" out of life and better health without loss of efficiency or waiting for an increased income

THE English people are said to have the reddest cheeks and best complexions in the world. Their blooming health and obvious enjoyment in being alive are largely due to their living out of doors more than we do and perhaps more than we ever can. For England is so far north that she has about two hours more daylight in which to disport herself. The twilight is so long that one may eat a ponderous British dinner, rest, and still have an hour for golf, tennis, cricket, bowls, or even photography, for in midsummer it is light enough to play tennis until nine or garden until ten. In consequence, every one seems to have some outdoor hobby, and even those who work indoors all day have about twice as much time for outdoor life as we. For two thousand years that long, precious twilight has been promoting public health and building British character.

Another natural advantage England has over America is that she has practically no mosquitoes, whereas it may cost us more than the Panama Canal to stamp out the kinds that carry yellow fever and malaria, as well as the kinds that are merely disagreeable.

But in spite of these climatic handicaps we are entitled to take a hopeful view of our situation. For, in the first place, any one can usually control mosquitoes in his own locality, by

cöoperating with a few neighbours, because mosquitoes (so entomologists tell us) rarely travel more than a quarter of a mile from the spot where they originate. And, secondly, some of us can get two more hours of daylight by shortening or rearranging the hours of labour.

Many people think that it is hopeless to try to get Americans to modify their pace of living. They believe that our climate will always breed haste and intensity. But I believe our pace is merely an incident of the pioneer stage. Remember how many men of the last generation boasted that they never took a vacation! Yet how firmly the vacation habit is now established! We may work just as hard while we work, but we work fewer hours than our parents. And, as a nation, we are steadily learning better how to rest and play. No amount of scolding will make us slow up. But men's instinctive love of pleasure will bring about the change easily and naturally — perhaps within a century. For the example of Europe is constantly before us, since Americans are always going there, and they all say when they return that the Europeans get more "fun" out of life than we.

One of the great features of outdoor life in England is *eating*, and the characteristic outdoor meal is tea. At one time I thought there must be forty million places in England where a person could have tea served outdoors. You can generally get it in a beautiful garden, often with music, and always with privacy and courtesy. The English climate naturally suggests a light meal about five o'clock; ours does not. Moreover, we haven't daylight enough to justify tea. A much better institution for us, I believe, is the *screened veranda*, where we may eat dinner leisurely in the cool of the evening after it is too dark to play. I recall a beautiful veranda on the Porter place at Lake Geneva, large, secluded,

embowered in vines, decorated with flowers, softly illuminated with hidden lights, free from flies and mosquitoes, and as serene and cool as the lake itself.

But better than another meal or any mechanical device is the *spirit of eating* which one acquires naturally in England. We Americans may eat a lot of expensive foods, but do we get the hearty satisfaction out of eating that Englishmen do? Do we take a cordial interest in anybody who eats and what he eats? Just as Mr. Roosevelt never tires of commending the man with a large family, so the Englishman steadily approves of the man who fulfils the other great duty toward the race, *viz.*, eating. The English make a lot of mistakes in eating. Even Americans say they eat too much meat. And public tea is usually brewed so as to deliver the maximum amount of tannic acid. But the spirit in which they eat makes for long life and pink cheeks. It is worth a trip to England simply to learn how to eat, but if one cannot do that one can learn from the novels of Charles Dickens.

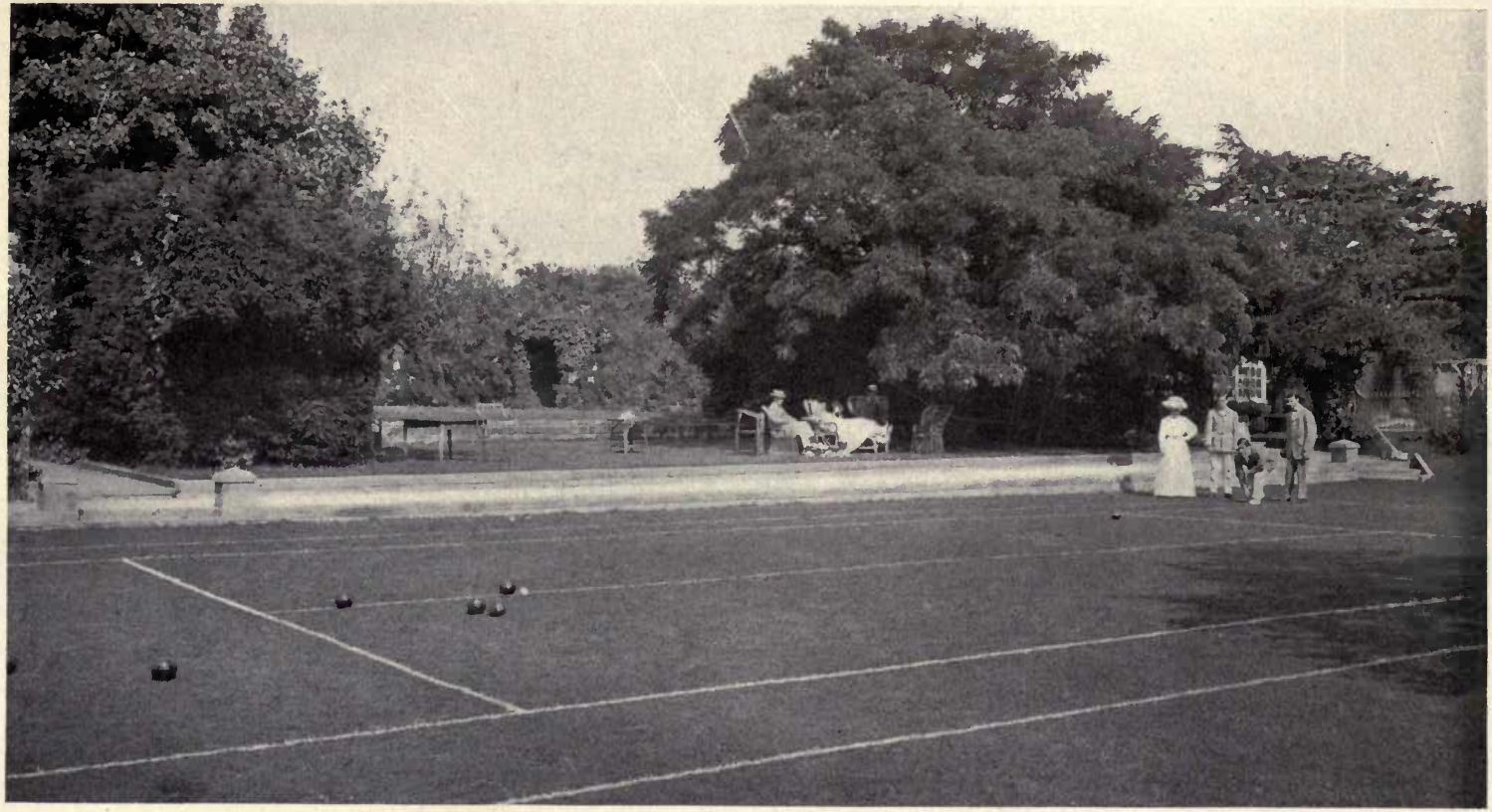
Next to eating, an Englishman loves *sport*, and justly, for it is the great national school where character is made. Somehow, the school room does not, in any country, develop character as much as it ought to, and as we all hope it will. The two virtues which the English deify are *pluck* and *fair play*. The first is learned by hunting the fox, the second on the cricket field. Both sports are peculiarly British. I do not see how you can explain in any other way why so many Oxford and Cambridge graduates in past centuries have been so efficient in public life. For the traditional attitude of the English students is to resist learning at every step, and formerly the dons had no conception of inspiration or of laboratory methods — only of trepanning the skull and inserting the

cubical fact. In America, college teaching may be better, but our athletics are not yet on a right basis. We are simply *crazy to win.* Some of our games make men hate one another, "slug" one another, cheat one another, and try to buy one another. Base-ball, much as I love it, is, in my opinion, a school of sharp practice. There is a moral line that no one can cross without debasing himself. An English boy is taught to *lose cheerfully rather than win by an unfair advantage.*

Now, *golf* embodies this spirit, and of all the games England has given us it is the only one that has spread like wildfire in America. I believe it is the best game for people over thirty, and I hope that it will give us that check in our competitive spirit which we need so sorely.

There is only one other game in England which I think ought to become a universal passion with us and that is *lawn bowls*, or bowling on the green. Cricket takes too long; fox-hunting requires a leisure class; but bowling on the green meets every requirement of our peculiar conditions. It needs little space, takes little time, does not require a change of clothing or a long journey by train or trolley, is not too violent, as tennis is for elderly people, is not namby-pamby, like croquet, and costs so little that poor men can enjoy it every day of their lives. Its most serious limitation, so far as I know, is that it requires four to play a game, but usually this is not serious, for there are generally plenty of men at a club to start a number of games, and if one has to wait there are plenty of games to watch. Ladies can play it with enjoyment, and without special dress.

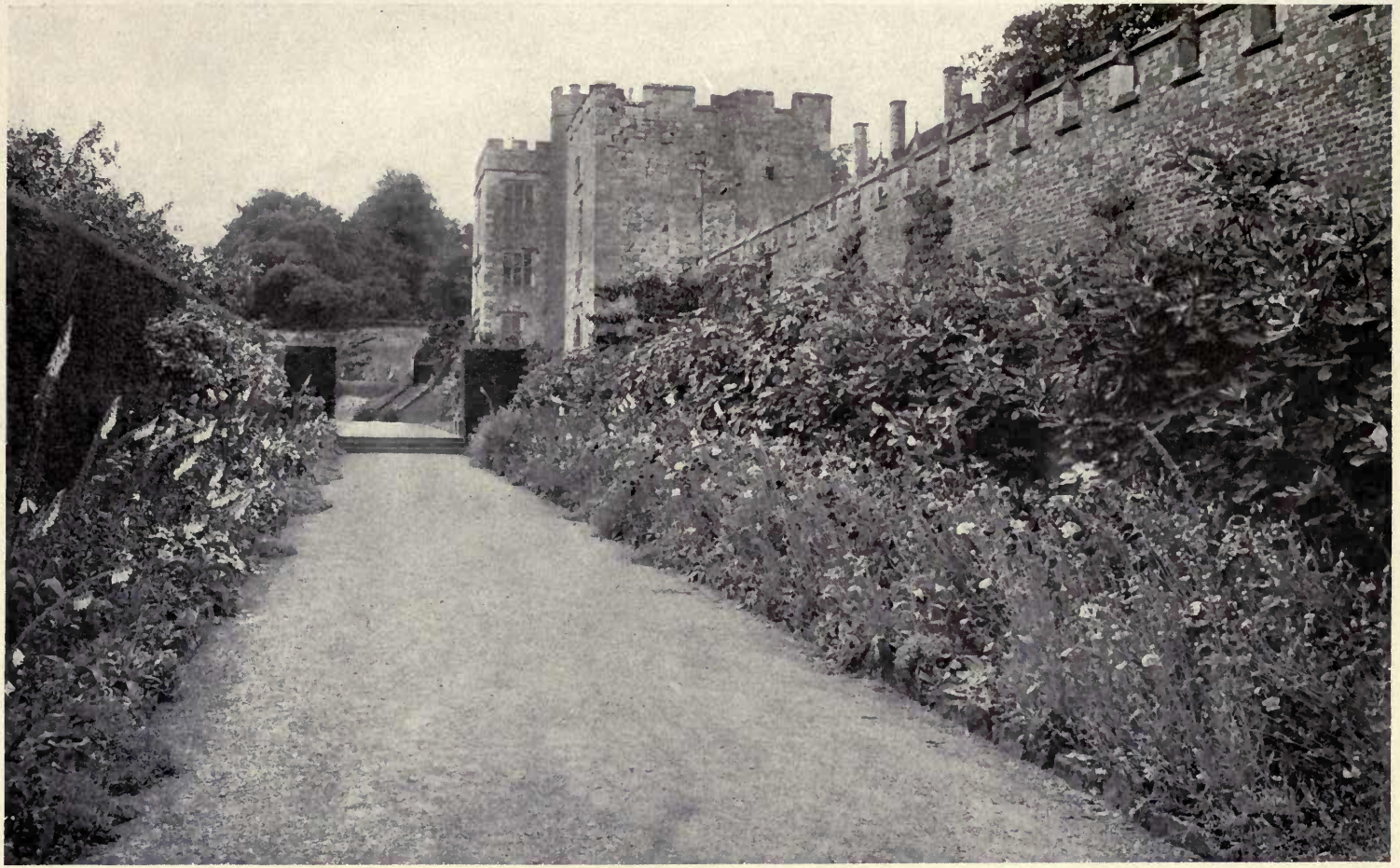
Plates 13, 14 and 38 illustrate the charming environment which this game may enjoy without the great cost involved in getting a big tract of land, such as golf, cricket, and



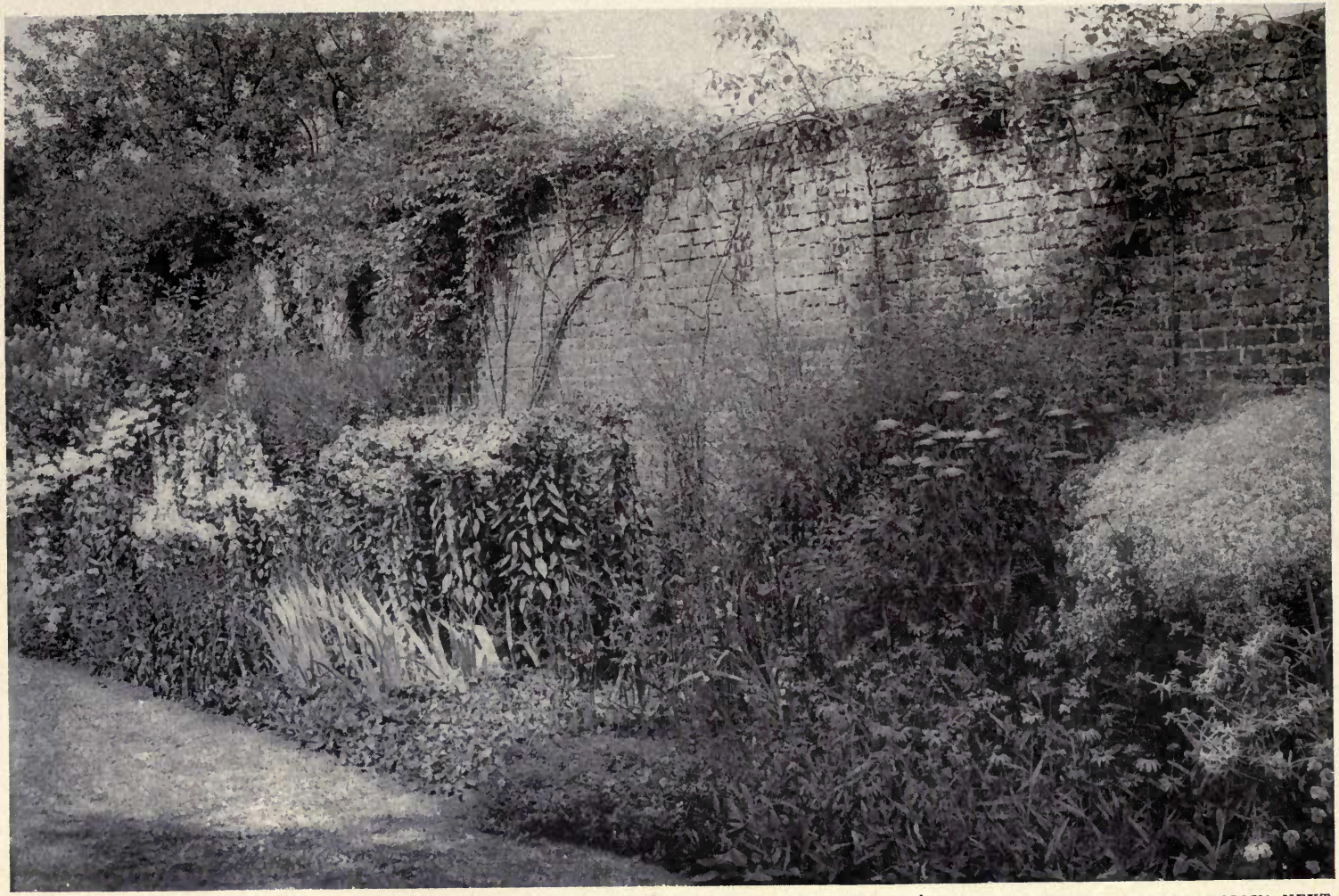
13 LAWN BOWLS, OR BOWLING ON THE GREEN. A GAME THAT REQUIRES LESS TIME AND MONEY THAN GOLF AND IS BOUND TO SPREAD EVERYWHERE IN AMERICA. HERE IT IS BEING PLAYED ON A TENNIS COURT; THE WHITE LINES ARE NOT NECESSARY. *See page 28*

14 THE OLD BOWLING GREEN AT SUTTON PLACE, SURREY, THE HOME OF LORD NORTHCLIFFE, THE FOREMOST PUBLISHER IN THE WORLD. SHOWING HOW EVERY MOMENT OF THE GAME MAY BE MADE FULL OF INTEREST AND BEAUTY BY LINING THE GREEN WITH FLOWERS

See page 28



STRAIGHT BORDERS IN A FORMAL ENVIRONMENT AT PENSHURST NOW FULL OF CALIFORNIA POPPIES. A FORTNIGHT EARLIER IT WAS FULL OF WHITE FOXGLOVES AND A LAVENDER VARIETY OF SWEET ROCKET. YEW HEDGE ON LEFT, FIGS ON THE WALL. THE CHARM OF SUCH A BORDER IS DUE MORE TO ENVIRONMENT THAN TO INTRINSIC QUALITIES



THE STRAIGHT, NARROW BORDER AT SUTTON PLACE. *See page 40.* AT THE RIGHT A CLOUD OF BABY'S BREATH; BELOW IT, A SEA HOLLY; NEXT, THE SHOWY CONEFLOWER (*Rudbeckia speciosa.*) ABOVE IT, FLAT YELLOW CLUSTERS OF *Achillea filipendulina.* AT THE CENTRE, PHLOX; AT THE LEFT, *Chrysanthemum maximum*

base-ball require. Some of the loveliest garden effects I saw in England were bowling greens, and we now have some exquisite examples in America, such as the Larz Anderson green, at Brookline, Mass., and the Mather green at Ishpeming, Mich., where the resting-place is under a pergola. The ideal bowling green is circular, so that you can change the "crease," or line of play, every day or two and thus keep the green everywhere in perfect order.

The chief expense in bowls is in maintaining a perfect lawn. A regulation set costs about twelve dollars, including eight bowls, two jacks, and a book of rules. If I were a factory owner I would certainly give my men a chance to play bowls and quoits at noon and night. Many employers in England do this. These games have an immediate effect in cutting out friction and improving the *esprit de corps*, while the health and efficiency of the workers are slowly but steadily improved. It costs only ten cents to find out whether this game is adapted to your purpose, for there is a little guide book that will tell you all about it. And don't forget that the antics of the weighted ball are always amusing to young and old, so that even if you never become an expert you cannot miss having good exercise and good fun.

But I think we have comparatively little to learn from England about vigorous sports and pastimes. *The greatest lesson about outdoor living that she can teach us is the necessity of having a garden.* For what we need most is relaxation and there is no way in which we can refresh ourselves for the world's work like living in a garden as the English do. We seem to think that whether a man has a garden or not is a mere incident, or simply a matter of taste. But to an Englishman a garden is as necessary as a dining-room and from the stand-point of national health, it is perhaps quite as necessary to a family as sanitary plumbing. I do not say this

because I am a horticulturist, but because we cannot be a pink-cheeked nation until America is one great garden as England is, and until we adopt that splendid English idea — the "week end."

From Saturday noon until Monday morning one half of England is entertaining the other half out of doors. Nothing but routine business is transacted on Saturday and Monday mornings. Indeed, week-end parties often last from Friday night until Tuesday morning, and they enjoy cheaper railroad rates than for the shorter period. I believe that our railroads can, and will, stimulate country living wonderfully by lowering week-end rates. The English railroads advertise bluebell excursions, so that London children may go out and pick these spring flowers. The newspapers always remind people of "Chestnut Sunday," when every one goes out to Bushey Park to see a mile of horse chestnut trees in bloom. Already our railroads are beginning to advertise nature's free shows, such as the autumn colours on the Hudson River, etc. The time will come when nearly all important business will be done by appointment and every one who can afford it will allow himself two or three days a weeks in the country from April till October.

We shall certainly develop an American style in gardening, and I believe that we shall get it largely by pursuing the British idea of *comfort*, rather than the Italian idea of *formalism*. These stiff, geometrical gardens which are dominated by architecture are only for show. They are frightfully expensive and not enough "fun." Marble benches are mighty cold and hard to sit on. You can't linger lovingly on a hot day over an Italian well curb with no water in it. The endless steps are tiresome. The glare of white stone makes the eyes ache. A hard-working, democratic people wants fun and comfort. Flowers are more

"fun" than brick and stone because they grow, change, bend before the wind, and show wonderful form, colour, and fragrance. And we need comfort even more than the Europeans, because our climate is harder and we work harder.

The two greatest comforts every American garden can have are a summer house and an *arbour*. I would have an arbour for grapes, because the grape is the easiest fruit to grow. No other vine, tree, or bush will bear every year and last a hundred years. It is probably the oldest plant cultivated by man, and therefore an important element in producing "charm." So, even in the largest flower gardens, I would have some sort of grape, wild or cultivated, for the fragrance of its bloom and the old memories that are stirred by this lovely leaf-form. But the practical reason why an arbour or pergola will be an essential feature of the American garden is that it provides coolness and shade, which are so essential in our hot climate. The æsthetic reason for it is that it breaks up a garden into many little pictures and provides the best possible frames for them. I wish every garden-planner could see Mr. Breese's old-fashioned flower garden at Southampton, L. I. A pergola runs around three sides of the garden, so that there is always a cool and shady walk from which one may view the flowers. There is a new kind of vine every few posts and a new picture every step or two.

The only drawback to the arbour or pergola is that it does not protect one from the rain. It is very pleasant to be outdoors during a gentle shower and enjoy the burst of bird song after the rain stops — provided one has a tight roof overhead. In England there are likely to be several gentle showers every day and consequently the *tight-roofed summer house* is a well-developed institution. But I believe we can improve on England by mak-

ing the summer house a real centre of outdoor life — having a place for dishes, a place for books, a place to write letters of friendship— even a place to sleep. Indeed, the outdoor sleeping movement is growing faster here, I believe, than in England. We are building houses especially for it and have perfected a device for which rich and poor may enjoy it even in the centres of our largest cities.

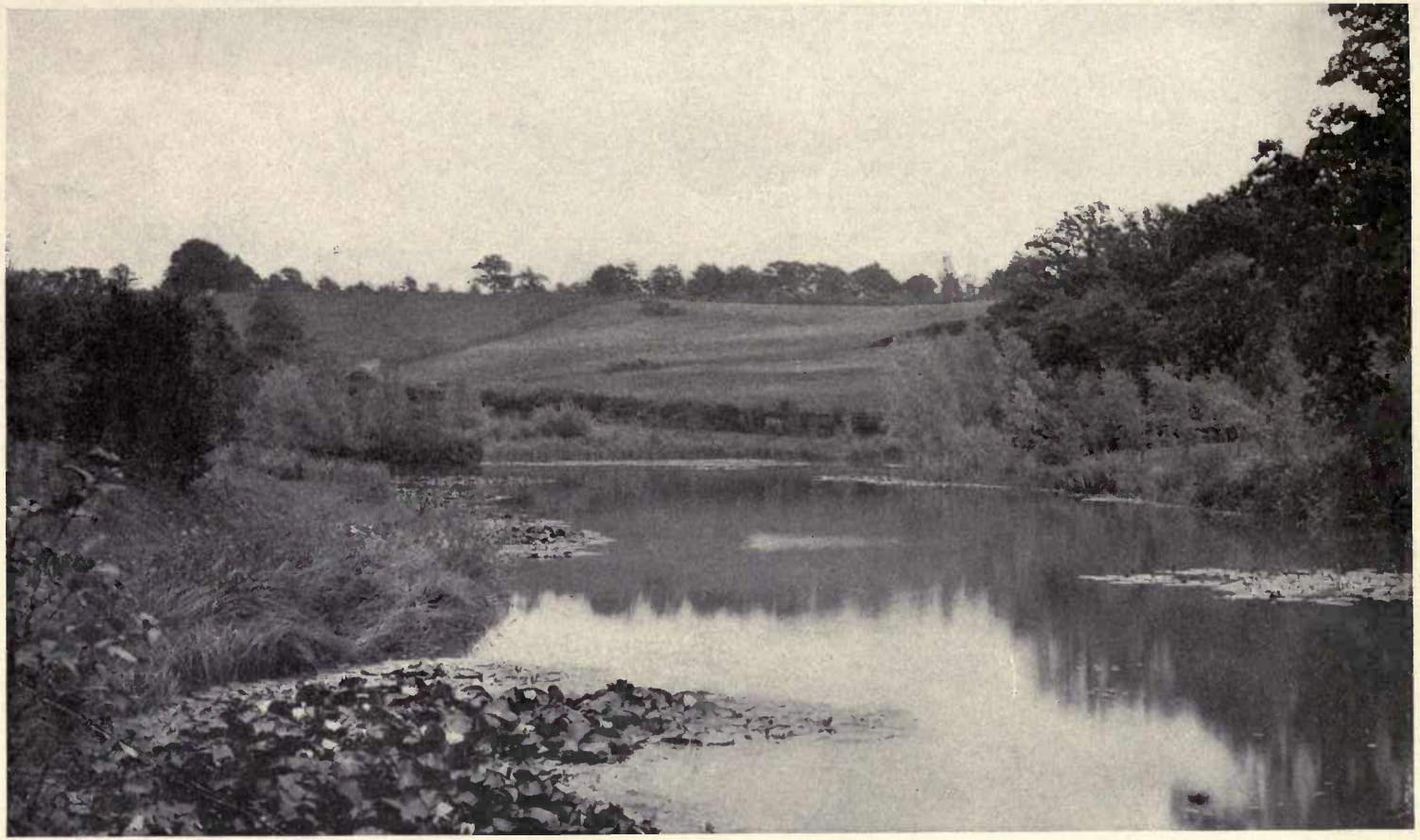
There are a great many delightful features of English outdoor life that I should like to dwell upon, such as the band concerts, flower shows, historical pageants, the swans on the Thames, and ornamental water-fowl on private estates, the mazes which amuse the children, the protection of song birds, the rearing of pheasant, grouse, and quail the foot-paths, the local guides everywhere for the wheelman and pedestrian, the way-side inns and their charming gardens that bear the sign of the automobile association's approval, and the column in the newspaper about the delights of the country, not forgetting even the bryony of the hedgerows and the momentous question that agitates the nation every Friday — the weather prospect for the week-end.

But all these things will come in time. We need not worry about America's never becoming as charming as England. A thousand years will attend to that. Meanwhile, the important thing on which we all can and ought to concentrate is this: to have a garden and really live in it. We must learn how to relax, how to eat properly and how to enjoy life more. All these things will come easily and naturally if we get the week-end habit and spend two sevenths of the week visiting people in their homes or entertaining them in ours. And here is a "check list" for immediate reforms: Do you play golf or bowl? Have you a garden, a screened veranda, a summer house, an arbour, and provision for outdoor sleeping?

17 DOUBLE BORDERS (*See page 41*). THE MOST CHARMING ENGLISH BORDERS LIE ON EACH SIDE OF A BROAD GRASSWALK CONNECTING ONE PART OF AN ESTATE WITH ANOTHER

18 THE FAMOUS LAKE AT KEW, WHICH ARTISTS LOVE TO PAINT, SHOWING THAT THE ENGLISH LIKE AMERICAN PLANTS MORE THAN WE DO. EVERY PLANT HERE IS AMERICAN, OR ELSE AN ENGLISH PLANT FOR WHICH WE HAVE THE EQUIVALENT. *See page 48*

19 ANOTHER VIEW OF THE LAKE AT KEW, SHOWING THE RIGHT WAY TO USE THE LOMBARDY POPLAR, THE MOST ABUSED TREE IN AMERICA. *See page 47*



20

"THE NOBLEST IDEA IN WATER GARDENING IS THE NATURALIZING OF WATER LILIES." A GLIMPSE OF MR. WILLIAM ROBINSON'S COMPLETE COLLECTION OF HARDY WATER LILIES AT GRAVETYE, SUSSEX. IMAGINE THESE PLANTS STUDDED WITH GLORIOUS FLOWERS IN YELLOW, ROSE, RED, AND WHITE. *See page 47*

HARDY BORDERS

CHAPTER IV

HARDY BORDERS

Woful shortcomings of most American examples — A perfect succession of flowers and a perfect colour scheme — The border should become a national institution

I THOUGHT I knew something about hardy borders before I went to England, but I was as a babe unborn. What we Americans don't know about the art of making pictures with perennial flowers would fill several large volumes. Our flowers are usually mere dots amid wide areas of foliage. We allow patches of bare earth to appear everywhere, even as late as July. We tolerate shocking colour discords. We suffer stakes to show. We put perennials in front of shrubs, where most of the finest flowers are sure to be starved or overrun. We indulge in a mighty housecleaning every spring — digging, dividing, rearranging, and manuring — to the ruin of all repose and beauty in April and May. And if you, good reader, were called upon to explain what colour scheme you used and what pictorial effects you aimed at, could you give a satisfactory answer?

Years ago my imagination was fired by that sensational passage in Robinson's "English Flower Garden" in which Frank Miles, the artist, laid down three startling propositions: Every square yard of ground should have bloom on it at least *eight* months of the year; every six inches of soil should contain its plant; and once a border is well made, it need not be dug up at all! One of the

first things I did on reaching England was to inquire where I could see a flower border like that of Frank Miles. I was informed that Miss Gertrude Jekyll was believed to have the most perfect borders of their kind in England. I might have armed myself with letters of introduction, but I have no desire to intrude upon the privacy of one who publicly declares that she is "growing old and tired, and suffers from very bad and painful sight." And there is no need of any one's seeing her garden because no one could possibly get from a single visit a hundredth part of what her latest book contains. "Colour in the Flower Garden," it seems to me, carries the art of designing hardy borders to a point far beyond anything previously written.

"It has taken me half a lifetime," says Miss Jekyll, "merely to find out what is best worth doing." Many people get their pleasure from collecting rare plants. Some prefer to make cut flowers the main feature. Others desire gardens that are merely decorative adjuncts of the house, *i. e.*, gardens for show. But the supreme pleasure, Miss Jekyll thinks, comes from designing a garden that is a "year-long succession of living pictures."

There is only one way of accomplishing this, in her opinion, and that is by dividing the whole estate into a dozen portions or more, each one of which is assigned a different period for its perfection. Thus she has one border for March effect, which contains snowdrops, crocuses, scillas, and the like. She has a spring garden devoted to April and the first three weeks of May, which includes tulips and daffodils coming through carpets of rock cress and creeping phlox. She has a "hidden garden" for the last days of May and first half of June (the period between tulips and irises), in which alpine flowers and tree peonies are a feature. She has a June garden, which is rich in roses, irises, and lupines.

She has a September border that is mainly for perennial asters. And her main flower border, which is 14 x 200 feet, is designed to be at its best only from the end of July to the end of September — a little more than two months. The pitch of perfection which Miss Jekyll demands (as shown by her pictures) cannot possibly be maintained in any one part of the grounds for more than three months, and even then only by using potted plants as "fillers." Two months is about the longest period that is practicable. What a different idea this is from Miles's dictum that "a yard of ground should have bloom on it at least eight months in the year!"

Is such a high standard worth while? Yes. I saw a border at Knole which, from end to end, was almost a continuous sheet of bloom. Countless thousands of flowers, in two unbroken bands lured the eye on and on until the straight lines seemed to converge in the mellow distance. The brilliancy and gayety of such a spectacle are beyond the powers of pen or camera to convey. And at Knole this magnificent display was maintained by a simple and relatively economical plan. A great many perennial plants are grown from seed every year in coldframes. Most of these are white flowers because white is the great peace-maker. This is the only colour that can be put in anywhere by cheap labour without making serious discords. I saw a young woman putting in these fillers wherever there was a bare spot of ground and doing the work well for thirty-six cents a day! This simple plan makes white the dominant colour in the border, and gives it an indescribably cool and airy effect which is most appropriate in hot weather. As I strolled along the borders, I was not conscious of there being too much white. It was only when one came to the end of the border and looked back over the whole extent that the white seemed dominant. I asked the gardener whether there was any other colour

scheme and he said no. Their main idea was to have every foot of ground covered, and they depended on white to soften all the colour discords. Rarely did they remove any plant for lack of harmony. This is the cheapest way of keeping a border up to high C that I know.

But such a plan would never suit Miss Jekyll, because there is no definite *colour scheme*. She believes that each important colour should be assigned a section in the border, where that colour is to be dominant but not exclusive. Moreover, these sections should be so arranged that each one is the best possible preparation for the next. For example, suppose you spend five minutes enjoying the flowers of the yellow section. Your eye has unconsciously acquired an appetite for the complementary colour, *viz.*, blue. Passing next to the blue section, it seems as if no blue flowers ever before appeared so pure or vivid in colour. It is an amusing experiment to gaze for thirty seconds at marigold flowers in full sunshine and then look at the leaves. Although they are normally a dull green they now appear a bright blue.

These are not mere tricks. They are examples of optical or *colour laws* that open a wonder world of delight, in which any one may be an explorer and discoverer. We miss all this if we scatter colours anywhere in the border and make our enjoyment of colours simply a matter of feeling, instinct, or taste. The artistic and exciting thing is to work out a definite colour progression. Miss Jekyll's border begins with a blue section, then a yellow, then orange and red, then yellow, and finally purple. This may sound very crude and mechanical, but so does every colour scheme in outline. You should know how the *transition* is made from one colour to the next.

For example, in the blue section of her border Miss Jekyll

uses only pure blues and tender colours. Theoretically, blues and purples blend, and theoretically it is better to get harmony by using similar colours than complementary colours, for easy transitions are more restful than contrasts. Practically, it is best to free the blue section from all purple, lilac, magenta, and allied colours. Only in this way can blue flowers be made to rival the sky in brilliancy. And since blue is a tender colour, Miss Jekyll allows in her blue section no other colours but the tenderest — the palest pink, the palest yellow, and white.

The pale yellow is important because it makes the transition to the yellow section. As the yellows become stronger, they merge into orange and then into scarlet, which is the middle section of the border. This is, of course, the strongest colour and is, therefore, entitled to the central position in her scheme. At this point many people ruin their borders by trying to pass from scarlet through crimson to purple. A better way is to come down again through orange to yellow and end with a purple section. The danger, here, is to make the transition from yellow to purple. Miss Jekyll does it by carpeting the ground in the purple section with gray-leaved plants and she uses the gray ground cover in her blue section also.

By this time it must be evident that the only way to plan an artistic flower border is to *draw it to scale on paper*, laying off the whole area in blocks, say five feet square. Nearly everybody plants perennials in irregular but solid blocks. A much more artistic way is to plant in "drifts," *i. e.*, long and rather narrow patches, which should generally lie somewhat diagonally. The chief advantage is that the effect is more pictorial. Another great advantage is that long, thin colonies do not leave big, unsightly places when the flowers are past; their deficiencies are more easily

hidden. And the acme of refinement is to interlace the colonies at their edges, so that the colours do not resemble so many separate daubs on a palette. It is easy to indicate on the plan just how to do it. For instance, suppose colonies 1 and 2 lie next each other, and you wish to tie them together. In the first colony write the figure 2 in about three places near the edge; and in the second colony put the figure 1 at about three places near the edge.

If you wish to keep your hardy border up to the high standard here indicated for as long a period as two months you must be prepared to have "fillers" ready in pots, and to adopt two other devices for securing an unbroken succession of bloom. One is "pulling down" which can be practised with unreasonably tall flowers like sunflowers and golden glow, thus transforming them from tall and narrow plants into medium-sized roundish masses that are covered with bloom. The other is to study combinations of plants that naturally supplement one another. For example, *Gypsophila paniculata* will cover the ground after Oriental poppies have lost their leaves, and later the brown seed-spray of gypsophila can be obscured by climbing nasturtiums.

The great objection to the system outlined above is that it makes of garden design a fine art, and therefore calls for life-long devotion on the part of conscientious and well-trained workers. Not one flower lover in a thousand can realize such an ideal. For the ordinary person such a border as that at Sutton Place is "plenty good enough." I was tempted to have a hundred pictures of it taken — say three a week, from spring to fall — in order to show the wonderful variety there is in any hardy border as opposed to the bedding system. But that would have been too easy a victory. I decided to have eight pictures taken under serious limitations — all on one day, and in this single, narrow, straight-edged border.

They are all remarkably different. Only two, however, are published in this book. (See plates 14 and 16.)

I must confess that I used to be prejudiced against *straight* borders. But for straight and narrow places they are appropriate, while undulating borders are not. The most charming English borders are not single, but *double*. (See plates 15 and 17.) They lie on both sides of a straight grass walk several hundred feet long, and flowers are seen against brick walls or yew hedges eight to twelve feet high. Such walks connect one part of an estate with another, like outdoor hall ways between outdoor rooms. This is very different from the American idea of throwing everything open. We shall soon learn to value privacy more highly. Of course, much of the charm of these borders is due to the backgrounds which the flowers have. Vine-clad walls are a great expense, and a perfect evergreen hedge means a wait of twenty years. The yew is not to be relied upon in America, but hemlock has practically the same texture.

Even if we cannot apply some of the principles above stated, even if it would be wrong for us to attempt the care of more than one little border, and even if that border exhibits all the shortcomings mentioned at the beginning of the article, still we ought to get better results by bordering our lawns than by setting geometrical beds in the lawn, simply because the borders tend to frame a home picture, while beds in the lawn destroy it.

Beginners usually go to the florist for geraniums and cannas, and plant them in circular beds in the middle of the lawn. This bedding system gives the biggest show the first season but it spoils the unity of the lawn, leaves a blank space seven months in the year, is monotonous and gaudy, and the expense must be renewed every year because the plants cannot endure frost. On the other

hand, a border of hardy flowers has an ever-changing charm — new forms, new colours, new odours— and it may be attractive two months longer. The plants are relatively permanent and may be multiplied without a greenhouse.

Therefore, I believe that one of the most important lessons we Americans have to learn about gardening is that *nine tenths of us ought to grow flowers in borders rather than in beds of geometrical shape.* I believe that the hardy border ought to and will become a national institution, that it will help us develop an American style in gardening, and that somehow we shall be able to give to it a charm that shall be distinctly American.

WATER GARDENS

CHAPTER V

WATER GARDENS

We can excel England on water-lilies, but have much to learn from her about design, arrangement, taste

WHAT we Americans strive hardest for in gardening, and oftenest miss, is what J. M. Barrie in one of his plays calls "that damned *charm*"; yet the surest, and sometimes the least expensive, way of winning this supreme prize is to have a water garden. There are two reasons for this: First, vegetation cannot help attaining luxuriance by the water side, and without luxuriance there can be no charm. So, even if a person makes every possible mistake in selecting, arranging, and cultivating water plants, he cannot help getting some luxuriance, at least in spots.

In the second place, water possesses an inherent charm which cannot be wholly destroyed even by making a stream muddy or lining it with dump heaps. So, even if we fret the water with visions of bad or inappropriate architecture (as Japanese tea houses, Dutch windmills, and highly coloured boat houses usually are), our friends may still refrain from handing our names to the "Society for the Suppression of Bad Taste." You cannot say this of ordinary, or land, gardening.

Let us try, then, to explain this charm of water, for if we cannot analyze it, how can we hope to reproduce it? What, for instance, is there about the water in these pictures that pleases you? "The shadows," some will answer, who look at the poplars

on plate 19. "The perfect reflections we see in still water," others will reply. "The play of wind upon the surface," say others. "The sound of running water," others may exclaim, thinking of the water-falls they know best.

All these answers are correct so far as they go, but I believe that only cultured people can delight in such things to the utmost. The fascination that water has for the uneducated can be explained, I fancy, only by going back to old root-ideas that humanity had before the first language was evolved. Thirst is one, and the pleasure of swimming is another. Of course, these ideas must not emerge into consciousness, or the spell is broken. But I am confident that the secret charm of water is that it *stirs in our subconsciousness these age-old impulses and race feelings.* How else can you explain the strong emotions we feel when we see pictures of water in any hot or arid region? How else can you explain why the gardens of ancient Persia appeal so powerfully to the imagination? Yet in those gardens, and in many Italian gardens, the water may be a mere well, an irrigating ditch, a plain drinking place, or a simple jet of water coming out of a crude pipe without the slighest pretense of beautiful architecture or environment. All the pleasant thoughts suggested by water go back to *human comfort and refreshment.*

But there is a certain mystical charm about water which, I think, cannot be explained on a physical basis. Water is the perfect *mirror.* Every mother watches for the dramatic moment when her child first sees its reflection in the looking-glass. In the water Narcissus met an unexpected vision. The mirror, somehow, makes things *better than they are.* It was said of Hawthorne that he tried to see life, not as it was, but as it would appear in a mirror. In the water we suddenly see ourselves as others

21. HARDY WATER LILIES. *SAXIFRAGA PELTATA* (ON THE BANK), HAS LEAVES A FOOT ACROSS AND MANY PINKISH OR WHITE FLOWERS HALF AN INCH ACROSS IN EARLY SPRING BEFORE THE LEAVES. IT IS A CALIFORNIA PLANT, BUT HARDY IN MASSACHUSETTS, WITH SLIGHT PROTECTION.

see us; we wonder who we are; and thoughts spring up about the mystery of life. Now, mere land rarely stirs such emotions. Architecture may only oppress the spirit. Colour in a garden may suggest only cost. So, I say, if you would have *charm* in a garden, have water, for then you cannot possibly miss it altogether.

I saw many charming water gardens in England last summer. Perhaps the most beautiful was that of Mr. William Robinson, who is said to have the largest collection of hardy water-lilies in Europe. He has three noble lakes on which to sail his lilies. I could not go there when the water-lilies were at their best, and the plates numbered 20, 23, and 25 give only a hint of the beauties there. But surely the noblest idea in water gardening is the naturalizing of water-lilies, the most gorgeous of all aquatic plants. It would pay any American who owns ten or more acres of water surface suitable for lily culture to go to England in July just to see this garden; but, of course, he ought first to arrange for permission to see it.

Another famous water garden is the lake at Kew, which is a favourite theme for painters. But here the effect is not at all dependent upon water-lilies or any other gorgeous flowers. The chief material is trees. The picture on plate 19 shows the right way of using the Lombardy poplar, the most abused tree in America. These few poplars are enough for a lake of three or five acres. It would ruin everything to repeat them at intervals. It is a good rule that two plants may make a pair, but three are the fewest that can make a group. The two poplars at the left may seem to group well, but that is because one is smaller than the other and because they blend into their background. Make them equal and alone, and they would spoil the picture. The great

lesson we should learn from this is to *use spectacular material with the utmost restraint.*

But before we go into questions of design I want to say that *we have a great climatic advantage over England in materials for water gardening.* There are no flowers in the world that combine purity and brilliancy of colour like water-lilies, and it is a perpetual marvel how these colours can be so vivid and yet so soft. It is true that the great improvements in water-lilies have been made in Europe, but it is only in hot sunlight, like ours, that water-lilies attain their most superb colour. Also we have a greater variety of plants suitable for banks and margins. But what we need to learn from England is to *love our own material.* The English people love American plants more than we do. For instance, consider the lake at Kew, as shown on plate 18. Every one of these plants is American, or else we have an equivalent of it, and the whole scene might be American. American plants are the conspicuous features in three other pictures (those showing marsh marigold, wild rice, and purple loosestrife).

A beginner nearly always rejects *native material,* because he sees no point in cultivating what grows wild all about him. Yet the longer he lives the surer he is to give up most of the European material, concentrate on American plants, and use the Japanese for spice. The native material grows better, costs less to maintain, and is more appropriate. To use the plants of a different climate is to fight nature, and lose; to grow the plants of our own and allied climates is to harness nature's forces. This Kew picture is better than a comparable scene in America, because there is more luxuriance; and we can never get the utmost luxuriance unless we make native plants dominant. Yet I must say that it would hardly do to reproduce this Kew landscape in America. In the

VIRGINIA WATER. AMERICA HAS THOUSANDS OF NATURAL CASCADES, THE BEAUTY OF WHICH WE CAN ENHANCE BY PLANTING; PLACING THE STONES AND CREATING A PICTURE LIKE THIS WOULD BE DIFFICULT AND COSTLY

North it would suggest mosquitoes, malaria, and snakes; in the South it would be stuffy or even steaming. It is not too luxuriant, but it needs open spaces. In a hot climate like ours we must look out for a free circulation of air, whereas in a cool climate, like England's, coziness is a main consideration. Now coziness comes from dense masses of upright vegetation which ward off harsh winds, while airiness comes from low, rounded masses of vegetation, and occasional wide openings to encourage air currents. I think the degree of openness shown in Mr. Robinson's water garden is better suited to American estates than the scene at Kew.

Broadly speaking, we Americans *do not know how to treat the margins of water*, especially when we use concrete. We leave a hard line of it exposed, as if the important thing were to advertise the cost. And we have thousands upon ten thousands of grassy banks devoid of vegetation that are as ugly as sin compared with the beauty we might have. I speak strongly, because it will be a complete surprise to many of my readers to hear that a grassy bank can be anything but beautiful. England can teach us that the best way to do is to fringe nearly all the margin with water-loving plants. Of course, I would determine the open spaces first. I would provide first for bathing, boat houses, piers, and other utilities, and then for air currents. But everywhere else I should hide the margin. There should be every degree of overhang from trees and shrubs, partly for the comfort that shade gives, and partly because of the charm of foliage as reflected in water, for the best place in the world to study texture is there. Contrast any American watering-place you know with the illustrations in this chapter and you will see that marginal planting offers a new world of beauty. Will you please note that at Gravetye and Kew there is *no sharp distinction between land and water*. Some plants

stand in one element, some in the other, and both overlap, as they do in nature. Willows grow on land, but their expression is watery; rushes grow in water, but they are makers of land. Would you rather have no vegetation on the banks? Or would you rather see a great colony of cardinal flowers reflected in the water; *Lilium superbum* growing eight feet high, and bearing thirty flowers on a stem; a thousand Japanese iris, with flowers nine inches across, and of many colours; tall yellow iris flashing in the sun; countless spires of purple loosestrife pointing to the sky; banks of violets and carpets of forget-me-nots?

The most striking plant for marginal planting is the Gunnera, which often has leaves six feet across. I heard one man boast of Gunnera leaves eleven feet across! (See plate 97.) This is the only important water-garden effect we cannot have. The nearest approach to it for us is that of the ornamental rhubarbs, some of which have leaves three or four feet across, and are very striking when in flower.

The ideas here proposed need not conflict at all with any commercial or pleasant ways of using water, *e. g.*, for fishing, house boats, growing water-cress, trout culture, or ornamental fowl of any kind. On the contrary, no landscape gardening is any good that does not provide for *use first and beauty afterward.* Mr. Robinson complains about the "wretched duck ponds" which, he says, disfigure England; but are we not more guilty? Why is it that so many Americans who love animals care so little for plants? I do not find this so in England. Yet for every kind of fish or water-fowl that we keep in these palpably artificial ponds there is some plant that should be naturalized in the water or on the margin, because it will cut down the cost of maintenance by furnishing natural food or shelter. A few colonies of plants founded on the

23 EMPEROR DAFFODILS ON THE BANK OF A WATER-LILY POOL AT GRAVETYE. NEXT THE WATER IS A LINE OF PURPLE LOOSE-STRIFE (*Lythrum Salicaria*) WHICH MAKES GLORIOUS COLOUR MASSES IN SUMMER. ENGLISH OAKS IN THE BACKGROUND. *See page 56*

life histories of the birds or fish would take away the curse of artificiality, and give the best kind of beauty — that which grows out of use.

In order to realize what glorious opportunites we have for water gardening, give one glance at any good map of the United States that shows what a magnificently watered country we have east of the Mississippi. In my experience, it is hard to go a mile in any direction without meeting some interesting bit of water. Add to this our natural climatic advantage over Europe in water-lilies, and the chance we have for working out an American style of water gardening becomes apparent. The way is even blazed for us, because we have two beautiful American books on water gardening*, which are both inspiring and practical. The wealthy collector will find a mine of delight in the coloured plates of Professor Conard's wonderful monograph on water-lilies, published by the Carnegie Institute.

On the whole, I should not be surprised if water gardening has the brightest future of any of the twelve most important types of gardening. It is not so long ago that we had no hardy water-lilies in yellow or red. Before I die I expect to see the gorgeous blues of the tropics transferred to water-lilies that may stay outdoors in the North the year round, and last as long as trees.

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*"Water Gardening" by Peter Bisset, and "Water-lilies and How to Grow Them" by Conard and Hus.

WILD GARDENING

CHAPTER VI

WILD GARDENING

How we can obtain most of the charm of an English park in four years, while the doomed chestnut trees may pay the bills

THE first day I was in England I stepped into the grounds of an archery club at Plymouth, and saw *millions of bluebells carpeting the ground by the acre.* They grew so thickly that it was impossible to avoid stepping on them, as the reader may see for himself, by plate 24, facing page 57. The effect was enchanting. One seemed to be walking in the forest of Arden. It made one think of Robin Hood, of Puck, of Arthur and his knights.

"Oh, yes; but it takes a thousand years to produce such effects," you will say.

On the contrary, I am positive that any American who owns a great estate can get most of this charm in four years, and practically all of it in one lifetime. These bluebells, for instance, cost only ten dollars a thousand, or one cent a bulb. They need no care after planting. You can order them now, plant them next fall, and they will bloom next spring. In rich woods they will increase so fast that you could duplicate the identical effect here pictured in four years at a cost of one hundred dollars.

Even the trees in your overcrowded, uninteresting woodlands will respond wonderfully in four years, if you will let a landscape forester mark (at a cost of eight dollars an acre) the trees which should come out this year, and the three succeeding years.

Then your "telegraph poles" will begin to branch out from below and make dignified and interesting trees. You can get a great deal of the atmosphere of English pleasure woods in four years simply by thinning the trees. And meanwhile you can be planting blue-bells and other bulbs, for they will not be harmed by the falling of trees. (See plates 5 and 24.)

You gentlemen of Long Island, who own hundreds of acres of woods, do you know why you enter them about once a year? It is because you cannot *stroll* in woods that are full of mosquitoes, briers, and burrs. And, beside, there is nothing to see, because you never use the axe or plant anything. Yet *you could quadruple the value of your wooded land as residential property in four years by wild gardening.* Last winter, near Westbury, I saw two estates on which twenty thousand dead chestnut trees had been cut out. If the owners had sold the live trees for poles four years ago, when they were warned about this incurable disease, they would have received enough to pay all the expense of transforming those woods into a charming English park. Last spring, for instance, they might have had a million blue-bells in those woods, the mosquitoes under control, everything that would tear flesh or clothing removed, and the trees all growing large and shapely.

It is only thirty years ago that the phrase "wild gardening" was invented by Mr. William Robinson, who wrote a book on the subject that is a joy. In the spring of 1909 I went to see his estate, where the idea of wild gardening is carried out on a glorious scale. I was too late to see the daffodils, which he used to plant by the ton and even by the car load, but the pictures on plates 20, 23, 26 and 88, give some idea of what the place is like. Mr. Robinson gave me these four photographs by Mr. Champion, with the

24 BLUEBELLS OR WOOD HYACINTHS IN THE QUEEN'S COTTAGE GROUNDS AT KEW. THEY GROW BY THE MILLION OR BY THE ACRE IN ENGLAND. WE CAN HAVE BIG SHEETS OF THEM, TOO, THE BULBS COST ONLY $10 A THOUSAND, AND THERE ARE BLUE, PINK, AND WHITE VARIETIES

(Scilla nutans.) *See page 55*

remark that he had been waiting thirty years for an artist who could do the sort of thing pictured on plate 88.

These two effects — daffodils and bluebells — we can reproduce literally. There is no question about their hardiness or about their looking like wild flowers, provided they are not set out in lines or patterns. The third great flower show in the English woods, before the trees leaf out, is made by primroses, but we cannot have primroses bythe million. However, we have an equally lovely yellow flower in the fawn lily or dog's tooth violet (*Erythronium Americanum*), which carpets our own woods in April. If you will keep cows and sheep out of your wood lot and spend twenty dollars for one thousand bulbs of this yellow adder's tongue, you will eventually carpet the forest floor with flowers and produce a distinctly American effect of which you may be justly proud. These bulbs ought to be collected in August.

American woods ought to be even more beautiful than the English in spring, for we have trilliums, bloodroot, and hepaticas. (The hepatica is also native to Europe, but not as plentiful as here.) The trillium is by far the largest white flower that will grow in the woods and that blooms in the spring, and you can get one thousand second-sized bulbs at two cents each. The hepatica is the earliest flower we can have, and you can buy the pink, blue, or white, single or double, from the regular nurserymen, or get the mixed sorts collected from the wild for twenty-five dollars a thousand. Bloodroot can be collected for eighteen dollars a thousand, or nursery-grown plants will cost about sixty dollars. It is a mistake to dig these three kinds of flowers in the spring. The best plan is to order them in summer for early autumn delivery.

After the trees leaf out the shade is too dense for continuous sheets of bloom either in England or America, but it is entirely

practical to have strong masses here and there, if we will only thin out the woods enough to encourage flowers, but not enough to let the grass crowd out all floral beauty. We generally swing from one extreme to the other. We begin by allowing no one to use the axe. Then we get the notion that an English deer park is the ideal thing, so we cut out too much and let in the cattle, whereupon the wild flowers vanish and the trees are left with ugly stag-horn tops.

The largest flower show in English woods after the leaves come out is made by the Pontic rhododendron, but this has a coarse, unpleasant colour. Our own Catawbiense, which blooms in June, is no worse in colour, and decidedly hardier, while our maximum is altogether lovely in July. Then, too, there is no evergreen native to Europe which is half so beautiful as our mountain laurel. I am happy to say that we really are beginning to appreciate these three evergreens. It is now quite the fashion to plant them by the car load. England cannot grow *Rhododendron maximum* at all.

FILLING MEADOWS WITH FLOWERS

Our meadows can be filled with spring flowers without impairing the hay crop. Mr. Robinson's meadows contain millions of bulbous flowers, great sheets of checkered lilies (*Fritillaria Meleagris*), and the sweet blue wind-flowers, of which the finest is *Anemone Robinsoniana* (supposed to be a variety of *A. nemorosa*). We cannot stain our meadows blue in March with the Apennine and Grecian wind-flowers (*Anemone Apennina* and *blanda*), but we can have goodly sheets of sky-blue scillas and glory-of-the-snow. And daffodils will realize Wordsworth's vision for us in April. Every one knows about his "ten thousand daffodils at a single glance." To accomplish this order ten thousand bulbs of Princeps (the earliest yellow trumpet daffodil suitable for naturalizing)

25. THE LEMON LILY (*HEMEROCALLIS FLAVA*), NATURALIZED BY THE WATERSIDE AT GRAVETYE. A LARGE, FRAGRANT, YELLOW FLOWER OF JUNE. THE NARROW LEAVES HARMONIZE WITH THE TALL GRASS, AND BOTH CAN BE MOWED IN LATE JUNE WITHOUT HARMING THE LILIES. THEY CAN BE PLANTED IN SPRING OR FALL.

and plant them this fall. In seven years they should number fifty thousand. And the whole effect, bulbs, planting, and after care, can be had for only one hundred dollars! If you would rather have great sheets of fragrant white flowers the first half of May, you can have the poet's narcissus, which is the cheapest of all, costing only five dollars a thousand ordinarily.

WILD GARDENING BY THE WATER SIDE

Water-lilies are naturalized on a great scale at Gravetye, and the picture on plate 20 shows a corner of one of the lakes where the water-lilies are just coming into bloom. This is a department of gardening in which we have a chance to excel England, because our hot summer sunshine brings out richer colours in these gorgeous flowers.

It will be many years, however, before we shall plant the margins of water with such consummate taste as Mr. Robinson. He gave a pretty full list of the plants he uses in that superb English periodical, *Country Life Illustrated*, on March 6, 1909. About the only important plant in the list we cannot grow is pampas grass. He uses many kinds of willows to obscure the line between land and water; Siebold's knotwort (*Polygonum cuspidatum*) for great billowy masses of foliage; the moon daisy (*Pyrethrum uliginosum*) for lush, herbaceous growth and clouds of white, daisy-like flowers; and the royal fern for delicate greenery.

But these are only samples. His grand effects come from *purity of design*, *i. e*, using water-loving plants only. "One essential thing," he says, "is the avoidance of variegated rubbish. Some of the finest lakes I know are spoilt by being freely planted with variegated conifers, which always, and usually very soon, take a diseased and ugly colour. The variegated elder is planted

in the Serpentine, a plant that should never be seen near water." I fear we are too often guilty of leaving a bare margin, setting out beds of cannas or other tender plants by the water side, and planting Colorado spruce, Waterer's spirea, or anything that seems to us beautiful in itself. Such plants are beautiful in their place, but painfully inappropriate by the water side. And it seems like criminal stupidity to do this sort of thing when the moist soil is yearning for the swamp rose mallow, the cardinal flower, *Lilium superbum*, rhododendrons, mountain laurel, purple loosestrife, red-twigged dogwood, and wild rice. All of these are native, and therefore we ought to grow the finest masses of them in the world.

Of foreign species we should use only those that demand an extra good water supply, look wild, cost little, and require no care after planting. We can no longer plead ignorance, for there are many catalogues now which give separate lists of plants for the water side. Some of the most splendid examples are the tall yellow iris of Europe, the Japanese irises, the Siberian iris, the hardy evergreen bamboo, the giant reed, the white and yellow loosestrife, and the globe flower.

One of the most charming water side effects at Gravetye is that of the lemon lily (*Hemerocallis flava*), a bit of which is shown on plate 25. Please do not confuse this with the coarse orange day-lily (*H. fulva*). This lemon lily is a common garden plant, but it looks its best at the water side, because its narrow leaves blend with those of the tall grass and both can be cut in July, if necessary, without harming next year's bloom.

WILD GARDENING ALONG THE ROADSIDE

The *roadsides* of England are often very dull to the pedestrian because the high hedges of hawthorn often cut off the view. But

26 NARCISSUS TIME IN WARREN'S WOOD, GRAVETYE MANOR, THE HOME OF MR. WILLIAM ROBINSON. A NATURAL WOOD, WITH NO LANDSCAPE GARDENING SAVE THE INTRODUCTION OF THE NARCISSI. *See page 56*

to those who drive or ride they are a dream of beauty, because the hedge banks are full of little flowers. The great lesson we should learn from this is that *we can and ought to make every foot of our daily walk or drive from home to office or station as full of charm as any equal distance in England.* We can do it by adopting the methods of wild gardening, which are quick, cheap, wholesale ways of getting large, permanent results. But it would be wickedly expensive and stupidly literal for us to throw up miles of earthen walls in a country where fences are cheaper than hedges. Those earthen walls in England, on which the hedges often stand, were made by cheap labour centuries before the invention of wire fences, and it would be poor economy to banish them now. On the other hand, we should be aping England to copy this simply because we could afford it. "Aping" any other country consists in copying her bad features, or in copying good things with materials that were once the cheapest but are now very costly.

We need a wholly different type of beauty and we have it already in the *shrub-lined roadsides of New England.* The only important class of plants beside water-lilies in which we have a climatic superiority to England is in shrubbery. The one thing I missed most there was the succession of simple, homely bushes, such as sumach, elder, bayberry, shad-bush, sweet fern, hazel, winterberry, and above all, our matchless variety of bushy dogwoods and viburnums. These can be collected by the wagon load or gotten by the car load from collectors of native plants at much lower rates than nursery-grown material.

If this particular plan does not suit your purse or locality, perhaps you can find a method that will be satisfactory by consulting the article on "Roadside Gardening," in the *Garden Magazine* for July, 1908.

In conclusion, I believe that the rich have four great opportunities for wild gardening — the woods, meadows, roadsides, and rocks. But in every American home there ought to be one spot sacred to American wild flowers. No good effect can be produced by mixing them with common garden flowers. They demand a place apart. It may be a separate border. It may be a nook in the shrubbery, where wildlings find congenial shade without being robbed by rank bushes. It may be only a dark passageway lined with ferns. But we all need this daily reminder of the precious things we can get only from wild nature. And when every American home has its wild garden America will be as home-like as England. One reason why the English seem like one big family is that every English home has its English plants. Have we fewer wild flowers? Are they inferior in beauty? No, and perhaps the quickest way to achieve an American style of gardening is for every home to cultivate, as a token of our brotherhood, some of the wild flowers that every American knows and loves.*

* The classical work on this subject is "The Wild Garden" by W. Robinson, first published in 1881. This is invaluable for inspiration and method. We have no practical American work yet, but the chapter on wild gardening in "The American Flower Garden" is valuable. The most complete analysis of American wild flowers worth cultivating is in *Country Life in America* for July, 1906, pages 326, 327, and 350 to 356.

ROCK GARDENING

CHAPTER VII

ROCK GARDENING

How to cover rocky land with the most appropriate vegetation at the least expense instead of making a lawn or doing other foolish things

THE largest rock garden in England is that of Sir Frank Crisp, at Friar Park, Henley. It is a faithful reproduction of the Matterhorn on a scale of about three acres. (See plate 50.) Seven thousand tons of limestone were brought from Yorkshire to make it. The snow-capped peak is represented by quartz. Below it are thousands upon thousands of alpine flowers growing in pockets between the rocks and filling every chink in the trails that ascend the mountain. There must be two hundred different species in bloom at once. At the base of the mountain is a miniature Swiss chalet, where one may sit and enjoy the scene, comparing all the main features with a little bronze model of the Matterhorn which Sir Frank had made for the entertainment of his guests. A brook courses down the mountain side and just before it reaches the chalet it forms a pretty cascade and then spreads out at your feet into a miniature lake decorated with pygmy water-lilies and richly margined with pinks, primroses, gentians, and other alpine flowers. (For pictures of this garden see plates 27, 29, 30, 79, 81, and 82.)

As to the Matterhorn feature, English critics are divided. They do not quarrel with the Japanese for imitating Fuji, but there is no precedent in England for duplicating any particular mountain.

However, all are agreed that Sir Frank's alpine flowers are grown with admirable skill and regard for colour harmony. The accompanying photographs well illustrate the style of rock gardening one sees everywhere in England, *viz.*, the culture of alpine flowers in the pockets of a "rockery," which is a complicated structure, put together in such a way as to give many kinds of rock, soil, and exposure. What England can teach us about this style of gardening I have tried to elaborate in Chapter XX. It is a grander theme to which I now invite your attention. For the best rockery in the world is obviously the work of man, while the finest floral pictures we can paint are those which seem to be the work of nature, *e. g.*, the cascade of pinks on plate 30.

The kind of rock gardening that offers the most brilliant possibilities to owners of American estates is the *painting of great landscapes on land that is naturally rocky.* If you have motored over the Downs amid ten-acre splotches of scarlet made by the wild poppies in the grain fields; if you have coached through the Lake Country when miles of heather were in bloom; if you have rested your eyes during a hot summer noon on a cool expanse of ferns clothing a beetling cliff; if you have felt the centuries look down upon you from castle or cathedral ruins crowned with great colonies of snapdragon or red valerian; or if you have gazed upward at the harebells and rowan waving above a cascade in the Scotch Highlands, you will know what I mean.

Amidst such beauty my heart sank when I remembered the advertisements painted on conspicuous rocks in America. (How soon shall we have laws that make it a criminal offence to ruin a landscape in this way?) And I thought of the fortunes spent at Newport and in Connecticut in blasting out rocks and burying them in order to make lawns amid some of the wildest and most

picturesque scenery on the Atlantic coast. There is nothing prettier than a lawn — in its proper place, and nothing more costly, vexatious, or futile than a lawn where nature does not want one. I believe we have spent millions in carting off rocks and carting on soil to attain a commonplace and conventional beauty, where thousands would have sufficed to restore and develop the inherent beauty of the region.

There are two kinds of pleasure any one may have in making a house and garden. The easy and obvious pleasure is to incorporate all the ideas we like best, to choose a style we have admired elsewhere, to plant the flowers we love best. Such efforts produce houses that do not fit their environment, and gardens that lack distinctiveness and charm. The finer and surer pleasure comes from *discovering the hidden laws and in giving them the fullest expression.* No houses in the world fit their surroundings better than the stone farm houses of the Lake District, because they are built of native stone in such a way as to resist the abnormally high rainfall of the region. No garden in the world is lovelier than a bit of rocky land at Haverford, Pa., where the characteristic beauty of rock-loving plants is allowed the fullest expression.

I came home from England with a determination to find out *what rock-loving plants are native to America,* and what sort of pictures we can make with them. The first encouragement I got was from the catalogues of specialists who collect native plants. These men offer about fifty species of rock-loving flowers at prices ranging from eight dollars to thirty dollars per one thousand or at the rate of one to three cents a plant. Doubtless the plants are not as good as nursery-grown plants, because the roots have little or no earth about them. Doubtless they have to be handled more carefully until they become established. But the

cheapness of them is astonishing, compared with nursery-grown plants. The saving may be anywhere from 100 to 500 per cent.

Suppose, now, you have a bit of *rocky woodland* that contains few wild flowers because picknickers have taken them, or cattle have been allowed there. For fifteen dollars you could have one thousand plants of dog's tooth violets, or Dutchman's breeches, or mandrakes, or wood sorrel, or the dainty little alum root. For twenty dollars you could have one thousand plants of hepatica, or maidenhair fern, or false Solomon's seal, or *Thalictrum Cornuti*, or the violet wood sorrel. For thirty dollars you could have one thousand clumps of spring beauty, or one thousand trilliums. Even if the plants were fairly common in your neighbourhood it would be impossible, in some cases, for you to collect the plants as cheaply as this.

Or, if you have *rocks exposed to full sunshine* there is still a good choice, even in a climate that is hot and dry in summer. For three dollars you could have two hundred hardy cacti. (No one would want one thousand cacti, because they are too suggestive of the desert.) There are several stonecrops or sedums which will grow in a pinch of soil on rocks that are so hot you can hardly touch your hands to them. For ten dollars you can have one thousand *Sedum album*. For twenty dollars you can have one thousand *Sedum ternatum*, or bloodroot, or moss pink, or bird's foot violet. For twenty-five dollars you can have one thousand scarlet columbine, wild blue phlox, pine barren sandwort, or even American bluebells (*Mertensia Virginica*). For three or four cents each you can get the dwarf early flags (*Iris cristata* and *verna*), bluets, and the thyme-leaved speedwell.

Even in the winter we can make some of the rocky land beautiful, at least when the ground is not covered with snow, by using

27 OUR GREAT OPPORTUNITY IS TO CREATE LANDSCAPE PICTURES ON ROCKY LAND BY CLOTHING IT WITH ROCK-LOVING PLANTS, ESPECIALLY AMERICAN ONES. SIR FRANK CRISP'S ROCK GARDEN, FRIAR PARK. *See page 65*

28 THE RIGHT WAY TO MAKE AN ALPINE GARDEN IS TO DESIGN A PICTURE, USE FEW ROCKS AND MAKE THEM INCONSPICUOUS

29 TWO DROUGHT-RESISTERS THAT WILL GROW IN A PINCH OF SOIL: WOOLLY-LEAVED THYME CLOTHING VERTICAL SURFACES, AND THE WHITE STONECROP FILLING EVERY CHINK BETWEEN STEPPING-STONES. (*Thymus Serpyllum*, var. *lanuginosus*, and *Sedum album*.) FRIAR PARK. *See page 68*

30 EXAMPLE OF THE PICTORIAL USE OF ROCK-LOVING FLOWERS AS DISTINGUISHED FROM THE COLLECTOR'S SYSTEM OF GROWING THEM IN POCKETS. A CASCADE OF FLOWERS MADE BY RARE PINKS (*Dianthus integer*). NOTICE HOW MUCH PRETTIER THE LICHEN-COVERED ROCK IS THAN BARE STONE. FRIAR PARK

evergreen ground covers, in which America is very rich. The finest are partridge-berry and wintergreen, because these have red berries that last all winter. Think of getting one thousand plants of partridge-berry for only fifteen dollars! I know one collector who sends them in regular sods, two or three feet square, each sod counting as perhaps a dozen plants. Galax leaves are also a joy in winter, being green in the shade and bronze in the sun. A thousand galax cost forty dollars or less. Prince's pine costs about twenty dollars; Labrador tea only ten dollars. I wish some one would try *Hypericum Buckleyi*, which is said to be a fine ground cover in shade, and has yellow flowers in summer. It is quite proper to use foreign flowers in wild gardening, provided they look like wild flowers and multiply with little or no care after becoming established. But it is not appropriate to use flowers that have been greatly improved by man, such as large pansies, or anything that suggests ceaseless care and expense. For instance, wallflowers and snapdragons are perennial in England, but here they cannot be relied upon to last over the winter. Therefore they belong in the garden, not the wild garden. The expense of raising flowers every year from seed is not appropriate to wild or rocky land, even if a person can afford it. But annuals that "self-sow" are welcome.

A thousand plants may seem a great quantity to order but two hundred and fifty is not, and two hundred and fifty can usually be had at the rate per thousand, which is a saving of seventeen per cent. over the rate per hundred. We must have some unit, and some very interesting points come out when you study what is actually available by the thousand. I do not approve of any style of wild gardening in which the plants cost more than five cents each, even if a person can afford it. For the

best wild gardening costs less than any other style of gardening. All the plants mentioned in this article are hardy perennials, which ought to multiply with little or no care after becoming established, as the whole object of wild gardening is to produce large, permanent colonies such as glorified the woods, rocks, and meadows when the first white men came to this country.

This method of buying plants solves the hardest problem of all, *viz.*, that of *expense*. For people will not pay as much to develop rocks, woods, and other wild places as for the immediate environment of the house. That is right, too. But the great trouble with American estates is that owners rarely see the *necessity of having a comprehensive plan for the development of the whole place*. They prefer to start with one or two details. They build a fine house and garden, and when the bill for the latter comes in they exclaim, "Heavens! if it costs this much to treat one little piece of ground what would it cost to develop the whole estate?" So they neglect the wild places, which may fill up with brambles, burrs, poison ivy, or other uncomfortable and ugly features.

The *six most popular rock plants in England*, as nearly as I can judge, are primroses, pinks, saxifrages, purple rock cress (Aubrietia), and the rock roses (Cistus and Helianthemum). Broadly speaking, I believe we can never rely on these for large effects, except in the case of pinks. (See plate 30.) I am rather glad that most of these flowers will not flourish permanently in America, except on a first-class rockery, for no country ought to imitate the landscape effects of a radically different climate. From the list of wild flowers given above I hope we can develop *an American style of rock gardening*. That style, I believe, must grow out of the following facts: Our summer is hot and dry; summer is our

national vacation time; we flock to the mountains and sea-shore, where rocky land is often prominent; and finally, labour is costlier here than in Europe.

But the *cheapest and most permanent way to beautify rocky land* is not to plant flowers at all. Instead, we should plant trees, shrubs, and vines. These will hold the soil, add to it, give grateful shade and cool greenery, and last a lifetime. A thousand pitch pine seedlings can be collected for twelve dollars. The fitting vines for decorating or obscuring rocks are Virginia creeper, bittersweet, and wild clematis. Among the most precious bushes for rocky land are bayberry, sweet fern, and fragrant sumach, all of which have deliciously scented foliage, so refreshing on a hot day. I need not enumerate a great list, for we have *an infallible principle to guide us.* Find out every kind of tree and bush that grows wild on your rocky land and in the neighbourhood. Multiply these in every way and make them the bulk of the planting. Gather seeds and make a little nursery of your own. Put soil into every bare pocket. Plant trees wherever there is soil enough to justify the effort. Do not as the people of Nahant, who, amid the ruggedest scenery on the Atlantic coast make lawns and plant cannas, but do as the Misses Loring have done at Pride's Crossing, Mass. Develop the native wildness of the place until it has the richest and most romantic beauty.

And to give the crowning touch to picturesque rock scenery we must use certain little plants like Kenilworth ivy, wall pepper, and New Zealand moss, which have a genius for filling every chink, especially under foot. For these plants give the effect of age, obscure freshly cut surfaces, round off sharp corners, and constantly excite wonder and delight by transforming a mere trowelful of dust into a soft green cushion, pleasant and yielding to the foot.

Haven't you a bit of rocky land that contains some dramatic feature? A spring, a brook, a dripping well? Why not develop a small piece along these lines? And why not have a comprehensive plan for all your rocky land?*

* There are a great many English books containing coloured plates of the flowers of the Alps, and many on rock gardening. Perhaps Robinson's "Alpine Flowers" is as good as any on cultivation. We have no American book on rock gardening. Tourists will enjoy Henshaw's "Mountain Wild Flowers in America" and Brown's "Alpine Flora of the Canadian Rocky Mountains." Students must patiently search out our loveliest mountain flowers with the aid of Britton and Brown, Gray, and Coulter and Nelson's "New Manual of Rocky Mountain Botany."

PEAT GARDENS

CHAPTER VIII

PEAT GARDENS

How we can transform every bad-smelling, malaria-breeding, mosquito-haunted swamp into a healthful spot of unique beauty — no objection possible to bog gardens

COME now, gentle reader, confess that you are prejudiced against this subject. The word "swamp" makes you think of chills and fever, snakes, green scum, mosquitoes, miasma, frogs, and all unpleasantness. If you have any other feeling you must be either a great traveller and a great reader, or an exceptional student of nature and gardening. The only attitude an "honest person" has toward wet places is to wish them all drained and filled with soil.

Drain them? Yes; but fill them, no! Draining alone will usually solve the health problem by exterminating the mosquitoes and, consequently, the malaria. But to fill low spots is often sheer waste. Many of the most gorgeous and interesting flowers in the world grow only in damp ground. To dump in soil is to destroy all possibility of enjoying a unique type of beauty. The city engineer and the real estate dealer often have to fill in such places, and country gentlemen unconsciously imitate their example. But grading is very costly. Why not take the money you expected to spend in filling a ravine or bit of damp woods and make a peat garden — the sort of thing pictured in this chapter?

Yet these illustrations do not show a thousandth part of the beauty of English "bog gardens." That phrase, however, I can-

not use in America. In England these words convey no unpleasant suggestion, because mosquitoes and malaria are practically non-existent. But here they are a national curse. It may take a hundred years and millions of dollars to subjugate these foes. Therefore I have ventured to propose the phrase "peat gardens," because "peat" has only pleasant suggestions. It makes one think of acres of heather, the smell of burning peat, the clean, cool cushions of sphagnum moss, of orchids, pitcher plants, and the shyest beauties of the heath family.

The name "peat garden" is defective, however, in two respects. For peat in Europe is made by heather, while American peat is composed of fern root. Our peat is not so easy to use for fuel, and not so good for cultivating certain plants, especially greenhouse orchids. But the main objection to the phrase "peat garden" is that it must be used to cover *two very different ideas, viz.*, the *peat bog* and the *muck swamp*. The latter is the commoner and less agreeable thing, for the soil is likely to be sour, and is full of the organisms of decay, while the waters of a sphagnum bog are antiseptic. They contain no bacteria or other organisms of decay, and that is why oak trees which have been blown into Irish bogs have remained in perfect condition for hundreds and even thousand of years. These sphagnum bogs are becoming rarer as the value of land increases, and it behooves us to save every one we can. For they are little wonder worlds of beauty and can never be replaced. I wish that every one who has to deal with damp ground could visit with me the bog garden of Sir Henry Yorke, in Buckinghamshire. For at every step one's prejudices melt away until one is quite entranced by the revelations of a new and overwhelming kind of beauty. I dare say there are larger and older bog gardens, but even in its new state I am sure you would enjoy it.

31 WHY NOT DRAIN YOUR WET LAND, MAKE A STREAM OR POND LIKE THIS AND PLANT WATER-LILIES AND JAPAN IRIS? ROYAL HORTICULTURAL SOCIETY GARDEN. IMAGINE THESE FLOWERS TO BE SIX TO NINE INCHES ACROSS

32 IRISES NATURALIZED IN A BROOK THAT RUNS DRY IN SUMMER. ROYAL HORTICULTURAL SOCIETY'S GARDEN. *See plate 90*

AMERICAN ORCHIDS IN AN ENGLISH GARDEN. THE SHOWY LADY'S-SLIPPER (*Cypripedium spectabile*) IS THE LARGEST AND MOST DESIRABLE OF HARDY ORCHIDS; IT CAN BE GROWN WITH PERMANENT SUCCESS ONLY IN THE PEAT GARDEN. *See page 79*

34 A BOG GARDEN IN HYDE PARK WHICH IS ENJOYED BY THOUSANDS OF PEOPLE IN LONDON EVERY YEAR. *Saxifraga peltata*, WATERLILIES, GUNNERA AND RHEUM

Suppose, then, that we have left the house and entered a piece of woods of, perhaps, ten acres. Most of us would become enthusiastic at once because of the century-old trees. But to Sir Henry it had seemed an uninteresting and badly neglected spot. You and I might exclaim with pleasure at the sight of acres of ferns growing as tall as a man, and foxgloves blooming by the million. But these are familiar sights to an Englishman. He knows that brakes are the weediest of all ferns, and the colour of the wild foxglove is undeniably crude and coarse, when you come to live with big masses of it.

So you must not shiver when I say that it was right to sail in and destroy a five-acre patch of this undergrowth. For there is another and higher type of beauty which belonged by divine right to the soil long before these cosmopolitan tramps — the brakes and foxgloves — usurped the land.

And please do not shudder at the idea of chopping down dozens of trees that were a hundred years old. Sir Henry had plenty more. And beside, in every wood that is simply let alone there are too many trees. The best thing that can be done is to thin out the short-lived kinds and the crooked individuals, so that the noblest specimens may have a chance to develop their grandest proportions. (See plate 5.)

Even more thinning than this Sir Henry did, and wisely. For you cannot have flowers without a certain amount of light, and even the most sentimental tree lover would not like to breathe a close, stuffy atmosphere, or walk in a grove that is damp under foot and gloomy over head. The moment you enter Sir Henry's bog garden you instinctively draw a deep breath of fresh, pure air, and you exclaim with delight at the pleasant interplay of light and shade, of sunny warmth and leafy coolness. There is no question

of lifting skirts or getting wet feet, for there are good dry paths everywhere.

Now let us make the circuit of this woodsy garden and enjoy a hundred flowers we have never seen before. The soil itself is a delight to walk upon, for it is a rich, spongy mass of reddish-brown peat, soft and cushiony to the foot. There are thousands of acres of such land in England made by the heather growth of untold centuries. And such soil is usually springy. Sir Henry was not content to leave this land all sopping and hummocky. The springs now feed a number of dainty little brooks, with clear water, pleasant gravelly bottoms, miniature water-falls, and even a little lake that is large enough for a few water-lilies. The sound of running water is charming in any garden, especially in the stillness of early morning, but in a peat garden it is doubly precious because it is a guarantee of health, as well as beauty.

Of course, peat and water make ideal conditions for members of the great *heath family*. Therefore, every one is tempted first to plant big masses of rhododendron hybrids, because they are the showiest and have the finest colours. Sir Henry Yorke has resisted this temptation, because it would have made his garden conventional. The hybrids he plants near his house because they are obviously the works of man. But in this sylvan retreat he chose to accentuate the native wildness. Therefore, he has planted the wild rhododendrons and the members of the heath family which do not suggest the garden. I mean such things as the flame azalea of the Carolina mountains; *Azalea Vaseyi*, perhaps the purest pink in the whole family; the mountain andromeda, marvellous for its sprays of creamy buds in midwinter; the Leucothoë, unrivalled for the arching grace of its branches laden with symmetrical rows of polished leaves; galax, a ground cover of incomparable beauty

all winter, whether its leathery leaves be bronze or green; partridge-berry and wintergreen, which have beautiful red fruits that show all winter against the background of their evergreen leaves; the American cranberry which has the same attraction, plus bronzy colours in winter; and last, but not least, Shortia, a plant of romantic history and exquisite beauty. (Plate 101.)

Next to the heaths in interest come the *hardy orchids*. Most people have the idea that orchids are air plants and have to be grown in greenhouses. Yet there are fully a hundred species that we could grow outdoors in the North. Of the fifty-six that grow wild in the eastern United States, more than half can be bought from our own nurserymen. Thirty-two Japanese species are catalogued by one firm in New York and the Dutch bulb catalogues offer about three dozen European orchids. Of course, many of these are more curious than beautiful, but many of them are altogether lovely. The showiest hardy orchid in the world is our own *Cypripedium spectabile*, pictured on plate 33. Its pinkish moccasins are about two inches long. People often dig up the plants in the woods and move them to their gardens, where they do well for a few years and then die. Sentimentalists are sometimes said to be the worst vandals. They mean the best, but know the least. Barbarians do not destroy flowers, but sentimentalists dig up the rarest and most exquisite plants of damp, cool woods (on the plea of saving them) and move them to hot, sunny gardens, where, of course, they die. If these people were sincere they would put their money into peat gardens. For that is the only way of growing most of these treasures.

Another unique group suited only to the peat garden is composed of *insect-destroying plants*, such as the sundews and butter-

worts, the pitcher plants and Venus's fly-trap. Of course, you can grow them in greenhouses, where you can watch them capture and devour flies and other creatures, but it is a pity to forego their magical environment. These plants cannot be well grown without sphagnum moss. I was pleased to see our Northern pitcher plant (*Sarracenia purpurea*) in Sir Henry Yorke's bog garden, but he did not then have the showiest of the whole group of insectivorous plants, *viz.*, *Sarracenia flava*. This is a native of the southern United States, yet Mr. Warren H. Manning once showed me some splendid colonies of it in his Massachusetts bog garden. The fly-trap is the most wonderful of all, for it claps its claws together and kills an insect before your very eyes. All these plants are now available from regular nurserymen, so that there is no excuse for robbing nature.

"But," you may exclaim, "I do not have any peaty soil or any sphagnum. What can I do?" Several things. If you want the finest kind of bog garden, do as Mr. Manning did — buy a sphagnum swamp, such as you can find in New England on wooded and hilly land suitable for summer homes, but costing only ten dollars to twenty dollars an acre. Or, buy a car load of peat, and sphagnum in any quantity you like, and make an artificial bog, taking for your guide Robinson's "English Flower Garden." If these methods are too costly, you can fall back upon the plants that can be grown in ordinary muck. By "muck" I mean soil in which you cannot see vegetable fibre as you do in peat. Let us see, then, if there are any showy plants that will grow in soil of any kind which is damp all the year or for a large part of it.

Showy? I should think so! In May you could have great clumps of Siberian iris bearing dozens of blue flowers four inches

35

AMERICAN WILD RICE (*Zizania aquatica*) BEAUTIFYING AND OBSCURING THE WATER'S EDGE; THE LITTLE CREEPER AT ITS FOOT IS GUNNERA MAGELLANICA. IVER HEATH.

See pages 297-301

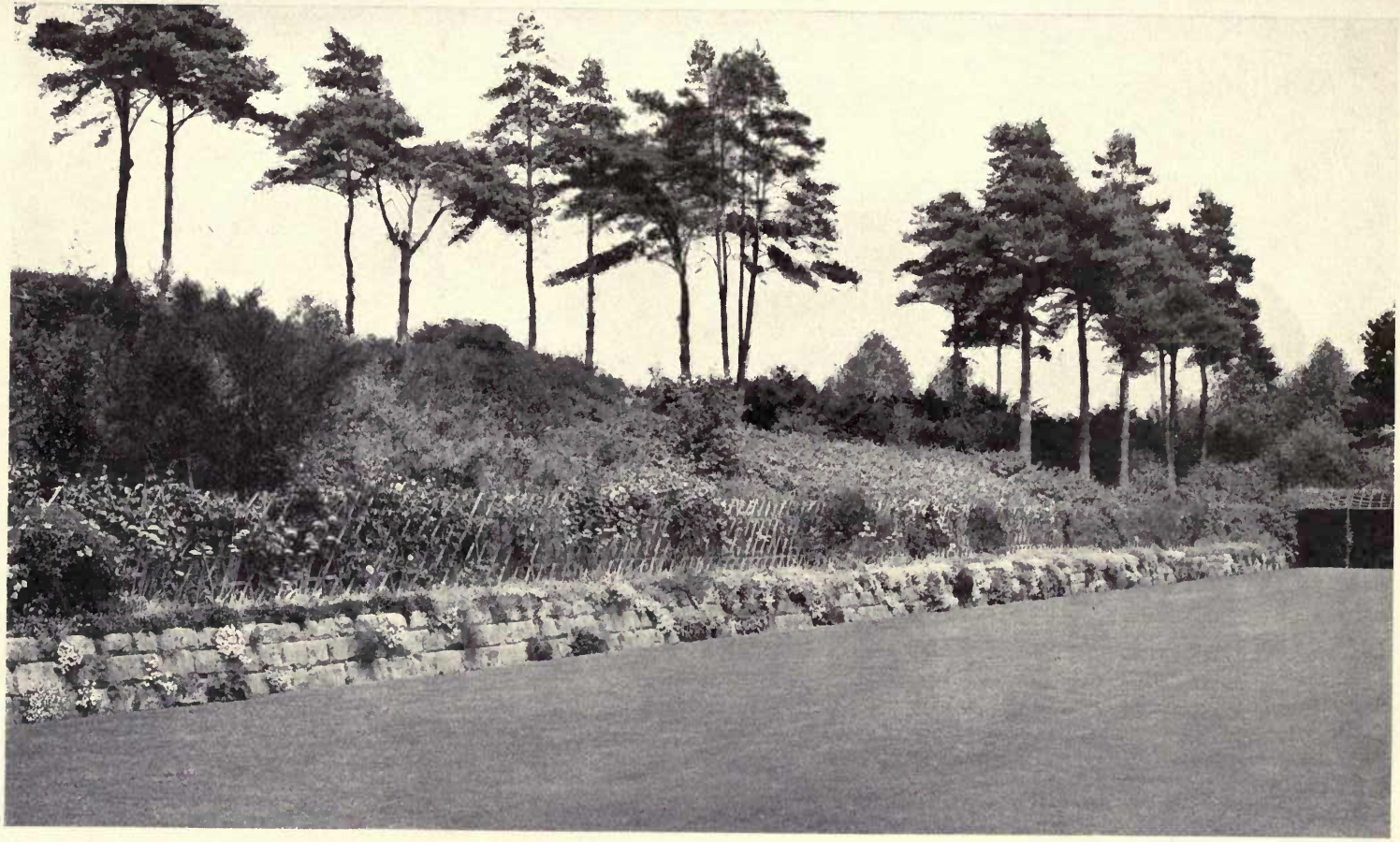
THIS PURPLE LOOSE-STRIFE (*Lythrum Salicaria*) LOOKS VERY ENGLISH, YET THE PLANT GROWS WILD IN AMERICA. *See page 81*

36 A LOW RETAINING WALL MADE AND PLANTED BY AN ORDINARY LABOURER. PANSIES ABOVE AND A HAREBELL BELOW, POSSIBLY *Campanula Portenschlagiana* (*C. muralis*). GRAVETYE, SUSSEX, HOME OF MR. WILLIAM ROBINSON. *See page 88*

CALIFORNIA

37 SHELTER HOUSE AT THE END OF THE BOWLING GREEN AT GRAVETYE. THE ROOF IS MADE OF STONE SLABS THAT HAD COVERED AN OLD BARN FOR 300 YEARS. EARTH WAS PUT IN THE CREVICES; STONECROPS, HOUSELEEKS, AND OTHER FLOWERS WERE PLANTED BETWEEN, AND NOW SOW THEIR OWN SEED. *See page 87*

THE YELLOW FUMITORY HAS FINELY CUT FOLIAGE, LIKE A DICENTRA, AND BEARS ITS YELLOW FLOWERS LITERALLY FROM SPRING TO FROST. IT SOWS ITS OWN SEED AND MULTIPLIES WITHOUT CARE (*Corydalis lutea*). GRAVETYE.



38

ONE SIDE OF THE BOWLING GREEN AT GRAVETYE, SHOWING A LOW RETAINING WALL, BUILT WITHOUT MORTAR AND DECORATED WITH ROCK-LOVING FLOWERS. ROSES ON THE TRELLIS, SCOTCH PINES ABOVE. THE PLANTS WERE PUT INTO THE CHINKS WITH EARTH BY THE WORKMEN. SKILLED LABOURERS WERE NOT REQUIRED. *See page 88*

across; in June, the tall yellow iris with flowers five inches across; in early July, Japan iris in many colours, with flowers six to nine inches across; in late July, the purple cone-flower, with flowers five inches across; in August, *Lilium superbum* growing eight feet high and bearing thirty flowers, each four inches across; in August and September, the swamp rose mallow, Crimson Eye hibiscus and Mallow Marvels, with flowers five to eight inches across.

If this is not enough, you can have many flowers that are smaller individually, but equally showy in mass, *e. g.*, the purple loosestrife (see plate 35), cardinal flower, bee balm, sneezeweed, swamp milkweed, turtle head, *Chelone Lyoni*, etc.

Some of these will do fairly well in ordinary gardens, but it is only in wet soil that they attain superb proportions and are splendid beyond words. For example, the purple loosestrife in the salt meadows grows only two or three feet high, and bears perhaps a dozen spikes. In the bog garden or by the water side, where it is released from the struggle for existence, it may grow six to ten feet high, forming gigantic clumps and bearing thousands of spikes, as at Barrytown, N. Y., and Holm Lea.

There is no book on peat gardening. In this chapter I can mention only the broadest features of this unique style. The materials for bog gardening are discussed in Chapter XXIII. For the construction of bog gardens the best work I know is Chapter XXII of Robinson's "English Flower Garden." The best article I have seen in any American periodical is "The Two Kinds of Bog Garden," which Mr. Warren H. Manning wrote for *Country Life in America* for August, 1908. Plants for peat gardens are easy enough to get. There are half a dozen American nurserymen who

catalogue fifty to a hundred species, and the European dealers, of course, offer a far greater variety. The big thing, however, is pictorial quality, and this depends not only on design but also on structure. And since the subject is so new, in America, at least, it behooves every one who can afford it to engage a competent landscape gardener.

WALL GARDENING

CHAPTER IX

WALL GARDENING

Every one who wishes to protect fruit from thieves, every one who has to do with sloping land, and every one who has even a rudimentary love of privacy will find an important message here

WE ARE bound to come to it! The day will surely come when there will be *thousands of miles of high brick walls in America*—too high for thieves to climb over. For in a few centuries America will be as crowded as England or, at least, the land will contain all the people it can support. There will be thieves then and they will want the fruit. Common fruit may even then be grown in big orchards without walls, but the finest fruit will be grown on dwarf trees, in private gardens, behind high walls of brick or stone.

All this is a shocking thing to say, and it has required a whole year for me to screw my courage up to the point of saying it. For the expense of such a system of gardening is enormous. But there are only two other alternatives. One is to do without the best fruit; the other is to employ the high hedge. The latter certainly costs less than a wall at the beginning, but is it any cheaper in the end? Consider the cost of trimming privet three times a year for a hundred years! Will privet last that long? Remember that it may take twenty years of your life to grow a perfect hemlock hedge eight feet high. And weigh this carefully: Walls do not steal plant food from the soil; hedges do. You must either buy more fertilizer every year or else make a partition of some kind

below the surface of the earth in order to restrain the hedge roots. A hedge may be more beautiful than a wall but I doubt if it costs less in the long run.

Is a wall ugly? No — not in England, and it need not be in America after the second year. For the quickest way to cover any big surface with living beauty is to use vines. And the beauty of English vine-clad walls is a thing to haunt you in your dreams.

I am even hopeful that we can by the use of walls attain *in three or four years* much of the mellowness which age alone is popularly supposed to give. True, mosses and lichens will never flourish in our hot, dry summers as they do in the cool, moist climate of England. But we can give the crowning touch to an otherwise perfect garden by growing *in chinks of the wall*, steps, and garden walks those precious little flowers which captivate the heart of every American the moment he sets foot within the sacred enclosure of a venerable English garden. We cannot establish wallflowers or snapdragons on our garden walls, but certainly we can have the red valerian which glorifies many a ruined castle and cathedral, the yellow fumitory, with its fascinating foliage and six months of bloom, the yellow wall pepper, the lavender Kenilworth ivy, the quaint rosettes of houseleek, the fragrant wild pinks, and many other precious little gems. We can do this by not plastering even with the brick, but leaving a shallow space for soil and by leaving out a brick, or half brick, at frequent intervals along the top of the wall.

The English get mossy effects in two or three years by sowing the seeds of certain wonderful little plants like New Zealand burrs or acænas, which make mossy carpets right in a gravel walk without a particle of soil in sight. Why can't we do this, too?

Just look for a moment at the flowers that grow on the *roof* of the little shelter house at the end of Mr. William Robinson's bowling green. (Plate 37.) It is natural to suppose that a roof would be about the hardest place in the world for plants to grow. Yet on this one roof there are perhaps twenty species of flowers! I wish I could give a life-size portrait of every different kind. Some of those miniature islands of bloom are perfect little poems. Now, this sort of thing we can do. True, we cannot buy slates that have been on old barns for three hundred years, but we can have them specially quarried if necessary, and if we insist upon it we can get good, square, broad, flat, honest, red tile — the kind you see everywhere on old houses in England. These we can have laid in such a manner that plenty of earth can be put in without interfering with necessary cement or causing a leak. Then we can get sheets of moss from the woods on which some of the flowers will eventually self-sow. And in the pockets of soil we can put plants of stonecrop or Sedum (a fascinating genus of many colours and textures) which will live on your roof when it gets so hot that you cannot bear your hand upon it and so cold that the thermometer drops below zero.

Another enchanting feature of English gardens is the crannied flower in the steps that lead to the garden and between the flagstones of the path. You ought to see the Kenilworth ivy filling every chink in the steps, softening every sharp corner, obliterating the bad architecture and caressing all the good. If you cannot go to England you can see the very thing I speak of in the frontispiece of "The American Flower Garden," by Neltje Blanchan. Instead of having solid stone steps the English often leave a crack an inch or two wide which runs the full length of each tread. Such spaces they fill with earth and in them they plant rock-loving flowers.

I should be afraid to have such a strip of earth more than two inches wide because the heaving and cracking are so much greater here, where the mercury drops twenty degrees below zero.

The finest chance of all, however, comes to every man who has any *sloping ground* to deal with. For then retaining walls are necessary and you may do the sort of thing pictured ~~on~~ in Plates pages 36 and 38. This particular treatment struck me as being very beautiful but it may not suit your fancy — too formal and too little variety. If so, I challenge you to go to your library and draw out "Wall and Water Gardens" by Gertrude Jekyll. If that doesn't open your eyes to a wonder world of beauty I miss my guess. For the treasures of the alpine regions of the world seem to be unlocked by the process known as "dry-walling." A dry wall is one that is put together without mortar, and it is generally strong enough to hold banks three or four feet high.

Hire an ordinary labourer — no need of a high-priced stonemason or expert gardener. Provide him with a lot of alpine or rock-loving plants. And as each stone is laid, lay in some of these plants, sprinkling the roots with a little fine sandy soil —not enough to prevent the stones from setting firmly, but just enough to encourage the roots to run clear to the end of the wall in search of food. Back of the wall pack a layer of gritty earth. The plants will soon find this and revel in it, for there they will have that combination of perfect drainage and never-failing moisture which they can get nowhere else on your place, save in a well-constructed rock garden. Thus you will be able to grow many choice flowers which would *perish on level ground* because of winter wetness. Famous examples of this in England are the wallflower, snapdragon, and Cheddar pink.

Even better than this scheme for America is a kind of wall

garden I saw at Waltham Cross, at the home of Sir Hugh Myddleton. The lay of the land required a wall only two or three feet high to keep a bank of earth from tumbling into the driveway. When a wall is as low as this it is possible to use *more earth than stone* and thus get enough soil in the wall itself to support a luxuriant growth of vines. But, of course, it is a great advantage to have behind the wall an inexhaustible supply of moisture and plant food. The wall I speak of had just enough rocks in it to hold the bank together and these rocks were all but obscured by vines and flowers. It was pleasant, however, to catch a glimpse of the rocks occasionally, as they gave a feeling of stability. I should not expect so crude an arrangement to be effective for the rock roses or helianthemums which glorify English walls of the same character, or any of the more difficult alpines, such as edelweiss, gentians, or saxifrages. The proper thing for such is a scientifically constructed rockery. But this plan of having more earth than stone gives us a chance to plant long low walls with great stretches of *easily grown perennial flowers* — sheets of golden tuft in April, fragrant breadths of rock-cress and woodruff in May, cool lines of *Cerastium tomentosum* or "snow in summer," cascades of wild pinks in June, tender blue alpine forget-me-nots, dainty masses of Kenilworth ivy, and hundreds of little blue spires of veronicas — all of which have the *true alpine feeling*. (All these you can buy in the form of plants in spring or raise from seed which is best sown in a coldframe in July.)

If you will take a slow automobile or trolley ride this afternoon and examine the stone and brick retaining walls that line the road in city and country your eyes will be opened to a sickening amount of ostentation and stupidity. For people who have to deal with sloping land generally do one of two foolish things.

The *stupid* thing to do is to make *steep banks of grass with sharp, formal edges.* These terraces are difficult to mow and costly to maintain in perfect condition. At best they are dull, compared with a real lawn or with the beauty that may be had by retaining natural contours and planting the banks with flowering shrubs and vines. For these have longer roots than grass and are therefore better adapted for holding the soil and preventing washouts. And a border of shrubbery makes a lawn more beautiful, because it acts like the frame of a picture.

The *ostentatious* way to treat sloping land is to build a *fancy stone wall* and leave all its surface exposed so that people may be impressed by the amount of money spent thereon. If mortar is necessary it is better to build strongly but simply and partially cover the wall with a variety of climbers and trailers. Even when we do this how little imagination and taste we commonly employ! We use miles of Japanese ivy as if it were the only vine in the world! Yet if the wall is beautiful it is a great mistake to hide it altogether because wall and vine could each set off the other's beauty. Moreover, Boston ivy (or ampelopsis) clings so tightly that it *emphasizes every artificial line* instead of softening it. Again, it rarely occurs to us to plant vines *above* a wall and let them hang down. Yet our own Virginia creeper is far more beautiful as a trailer than as a climber; witness the picture at plate 39. And every one who has to build retaining walls can transform them into veritable *hanging gardens*, simply by planting in the earth above them wild grapes, Virginia creeper, wild clematis, multiflora roses, Hall's honeysuckle, and bitter-sweet. A variety is better for the roadside than a monotonous expanse, and the combination just mentioned will give beauty the year round.

Mind you, I do not advocate a high brick wall *around the*

whole estate, such as you see everywhere in England! It will be a long time before every country roadway in America is an unbroken vista of high walls and hedges. I doubt if we shall ever come to that, for it implies the aristocratic spirit, while garden and retaining walls do not. But whenever it is necessary to build a wall around any property and it is impossible to plant vines above, my advice is this: Plant flowering vines wherever there is plenty of sun, and on the shady walls plant English ivy and climbing euonymus — not the trifling variegated kinds of euonymus, which fall an easy prey to San Jose scale, but the green, round-leaved kind (*Euonymus radicans* var. *vegetus*), which eventually is garlanded with red berries that are full of cheer all winter. Of these two evergreens we can hardly get too much; for never in the North will they thrive as wantonly as in England, and never will our climate deal as lovingly with architecture as the English mosses, lichens, and algæ. We shall have to plant millions of climbing euonymus and millions upon millions of English ivy before American roadsides may attain the classic dignity and beauty of old England.

SEVEN REASONS FOR HIGH WALLS

Meanwhile every one of us who owns a bit of sloping land can make a retaining wall that shall be a perennial vision of floral beauty. Every one who wishes to soften the newness or hardness of architecture may do so by planting vines or by sowing the seeds of cranny-loving flowers. And every one who can afford high brick walls around his garden should have them for the following reasons:

1. They will protect the fruit from thieves.

2. They will enable you to grow figs in the North, and the new race of hardy citrus fruits that will soon be here.

3. They will make your kitchen garden yield from one to three months longer.

4. They will shelter your children so that they may play outdoors in winter.

5. On their north side you may grow English ivy and probably many other evergreen climbers from subtropical regions.

6. They will make an effective background for hardy perennial flowers. (See plates 16 and 14.)

7. And last but not least, they will surely give you some of the charm of an English garden, for without privacy, there can be no charm. (See plate 12.)

ROSE GARDENS

CHAPTER X

ROSE GARDENS

The wrong old notion that roses should be grown only for cut flowers or in a place apart, in bare dirt or in manure heaps — How roses may be restored to the garden with glorious new effects

THE most inspiring rose garden I saw in England was that of Mr. William Robinson, founder of *The Garden*, and author of that immortal book, "The English Flower Garden." To give any hint of this garden's beauty, three photographs at least are required. The one at plate 40 indicates the general effect; one at plate 41 shows that the beds are not one great expanse of dirt or manure, but are carpeted with exquisite little flowers or shining evergreen foliage; while the one at plate 45 makes it clear that these carpeting plants do not seriously interfere with the quantity or quality of the roses. Incidentally, these pictures ought to convince any fair-minded person that the great apostle of landscape gardening in England has been misrepresented by those who claim that he has no appreciation of formal gardening.

How much better this idea is than the one which has been preached for half a century, *viz.*, that the rose should be *banished from the garden* and grown in a place by itself, called the *rosery!* Everywhere you find the notion that a rose bush is fit for nothing except to produce perfect flowers for cutting. And everywhere you see rose gardens from which all romance has fled. They may make a big show in June, but the rest of the year their beauty is

destroyed by spraying mixtures, manure, straw overcoats, and stems cut back to stubs.

There were two excuses, fifty years ago, for banishing the rose from the garden. For at that time there were no roses that bloomed all summer; and the old-fashioned rose bushes (hybrid perpetuals) were generally unsightly when out of bloom. Especially were these things true in America. For even to this day the hybrid perpetuals give few flowers or none after June, as compared with Europe. Also we have more insects and diseases to fight than the Europeans. Our rose bug is worse than all their rose pests put together, and even to-day we have found no cheap way to control it.

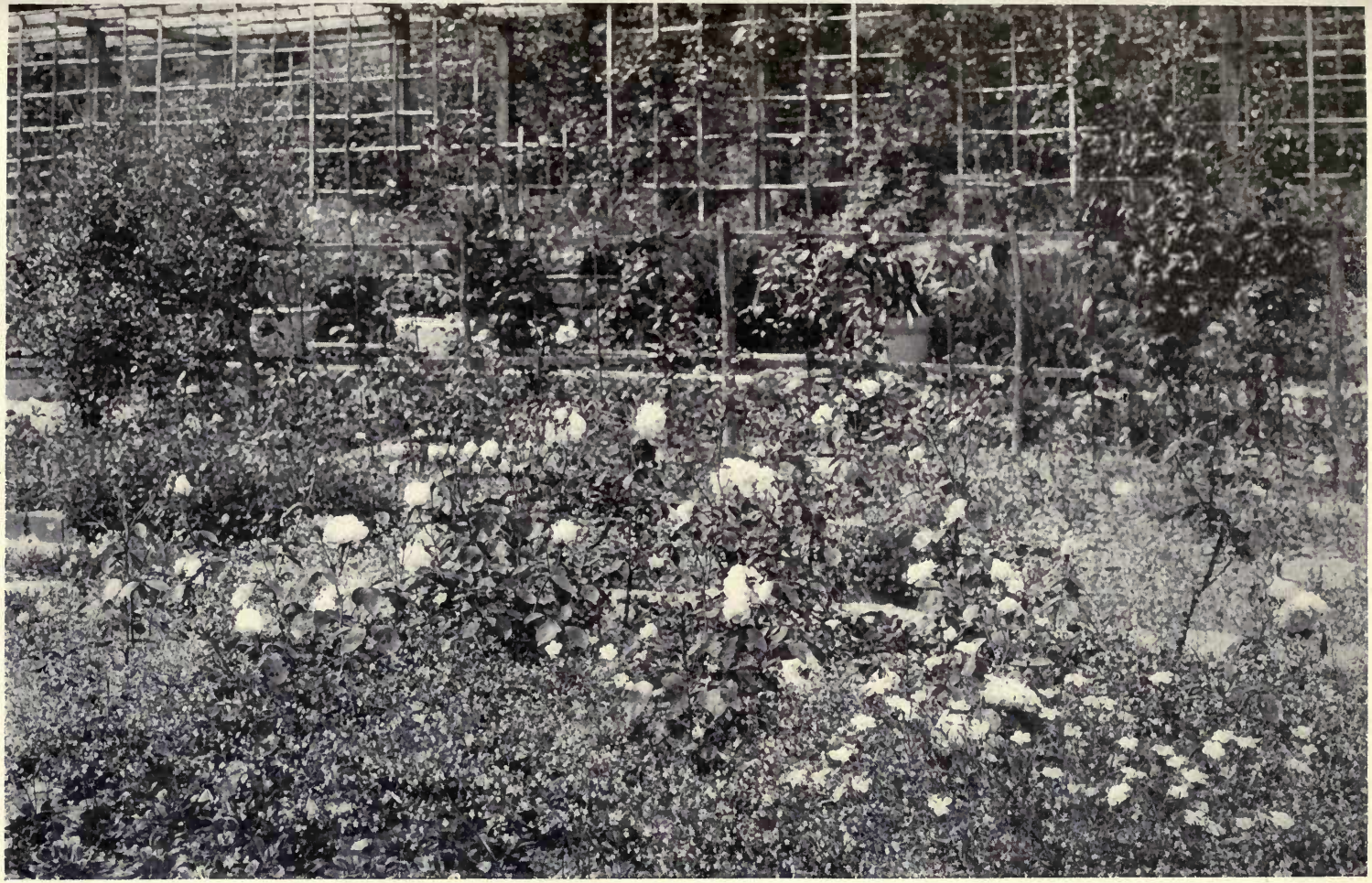
But the old excuses no longer hold good. For now we have the hybrid teas, which really bloom all summer (though scantily in August in America), and these roses make graceful bushes (unless they are pruned back severely by people who are willing to sacrifice garden effect in order to get the largest flowers possible for vases).

Moreover, we now have far better climbing roses, especially hybrids of the many-flowered, and memorial roses, such as Dorothy Perkins and Lady Gay, and therefore we can have better arches, trellises, bowers, arbours, and summer houses than ever before. And this is the artistic way to get height in a rose garden instead of using standards, which are as ugly as they are perishable. I do not blame any one for wishing to get some relief from the flatness of the conventional rosery, but tree roses are a grotesque solution, since they cannot hold themselves up but have to be staked. Moreover, they are pitifully thin, whereas these Japanese climbers supply us with the one thing that we have always needed most, *viz.*, luxuriance.

39

WE HAVE TO GO TO ENGLAND TO SEE THE POSSIBILITIES OF OUR OWN NATIVE VINES. COURTYARD OF THE NEW INN AT GLOUCESTER, (ERECTED ABOUT 1450), SHOWING THE VIRGINIA CREEPER STREAMING DOWN FROM ABOVE. THE TRAILING EFFECT IS EVEN FINER THAN THE CLIMBING. *See page 90 and plate 74*

THE MOST INSPIRING ROSE GARDEN IN ENGLAND IS THAT OF MR. WILLIAM ROBINSON, AT GRAVETYE, SUSSEX. HERE ROSES BLOOM ALL SUMMEP, AND THE BUSHES ARE GRACEFUL — NOT UGLY STUBS WHOSE ONLY USE IS THE PRODUCTION OF BIG FLOWERS FOR CUTTING. *See page 95*



41

MR. ROBINSON'S ROSE BEDS ARE NOT GREAT STRETCHES OF BARE DIRT OR MANURE, BUT ARE CARPETED WITH FLOWERS AND EVERGREEN FOLIAGE. THE LACE LIKE EFFECT IS DUE TO SAXIFRAGES, MOST OF WHICH ARE IMPOSSIBLE FOR AMERICA. THE SPECIES BEST WORTH OUR TRYING IS LONDON PRIDE (*Saxifraga umbrosa.*) *See pages 97 and 98*

42 OREGON IS THE ONLY PART OF THE UNITED STATES WITH A CLIMATE LIKE ENGLAND'S. IN PORTLAND, STREETS ARE LINED WITH ROSES LIKE THESE. *See page 99*

THIS CONNECTICUT HOUSE WAS LATTICED SO THAT THE WALLS COULD BE COVERED WITH CLIMBING ROSES. ONE OF A THOUSANL NEW PICTURES WE CAN PAINT WITH RAMBLERS

43 "WE CANNOT YET PRODUCE LARGE DOUBLE ROSES ALL SUMMER ON HOUSE WALLS UP TO THE THIRD STORY." AT GRAVETYE. *See page 100*

CALIFORNIA

THIS IS THE TYPE OF ROSE BEAUTY IN WHICH WE CAN EQUAL OR EXCEL ENGLAND — CLIMBERS WITH MANY SMALL, DOUBLE FLOWERS IN LARGE CLUSTERS. THE DOROTHY PERKINS ROSE IN ENGLAND, A LOVELIER FLOWER THAN THE GAUDY CRIMSON RAMBLERS

See page 100

The finishing touch, however, in the new type of rose garden is supplied by the *carpeting plants*, which not only hide the bare earth but give a second crop of flowers from the same ground. Although there is an astonishing variety of them in Mr. Robinson's garden, the main effects are three. The *showiest* is that of pansies and violas. Pansies have bigger flowers and a wider range of colours but a shorter season of bloom, and they have to be raised anew each year from expensive seed. In America they will bloom freely only in the spring. Violas, which are also called "tufted pansies," make a much neater carpet, bloom all summer (except for a fortnight's enforced rest), and are more nearly perennial, so that when you find a variety to your liking you can propagate by division the identical thing you like best. Elsewhere in England I saw the rose-and-pansy idea carried out on a gigantic scale — seven thousand roses and eighty thousand violas — but I am sure that Mr. Robinson would not have enjoyed it. Like every true artist he believes that formulas tend to kill spontaneity and imagination. He abhors carrying out any gardening idea (even his own) to its logical conclusion. Apparently he believes that perfection of detail inevitably suggests straining after effect, whereas a garden should always be easy, graceful, and unconcerned.

The *most exquisite* effect under roses is the lace work made by myriads of minute, starry, white flowers, especially the saxifrages, which make mossy cushions of foliage. At first I despaired of our ever getting this effect in rose beds. Certainly our summers are too hot and dry for saxifrages. But the stonecrops or sedums are obviously resisters of heat and drought, and that whole genus (except the coarse, tall kinds) ought to be studied from this point of view.

But the *most useful* effect, perhaps, among the carpeters of

rose beds is that of *evergreen foliage.* I say "useful" because evergreen leaves will, presumably, protect rose roots from alternate freezing and thawing better than dead foliage, even when it forms a dense mat, like that of the moss pink (*Phlox subulata*). But even if that should not prove true, the ground is bare most of the winter over the greater part of the United States, and it is pleasant to catch a glimpse of some brave, fresh greenery amid universal desolation. For such a use England possesses a perfect plant in the London pride (*Saxifraga umbrosa*), the thick rosettes of which are indescribably cheery. I fear it can never thrive here as there, but we have plenty of other material, for one February, at South Orange, N. J., I walked over many perfect evergreen carpets of thyme, thrift, sandwort, hardy pinks, etc.

"But how about the practical side?" you may ask. "Can we do it? And how can we protect the roses?"

All such questions, I believe, can eventually be answered with satisfaction. At present the idea is only in the experimental stage here. However, one can see something of it at Elizabeth Park, Hartford, Conn. It is impossible that any one system of rose culture will do well for all varieties and in all parts of the United States. We cannot expect that the new system will keep tender roses from freezing at the root in zero weather. But wherever hybrid teas are hardy without more than two inches of winter mulch, the new plan ought to be successful, because these carpeting plants constitute a living mulch. This will be a great gain for the most populous portions of the North, because we can get rid of the everlasting digging up of rose beds every spring and the heaping of them in autumn with manure, which is often done near the most important windows of the house. Mr. Robinson's rose beds remain in excellent condition for six or eight years with-

out adding any manure to the surface, even liquid manure. It is simply a case of digging deeply (say, three feet) and enriching the soil once for all.

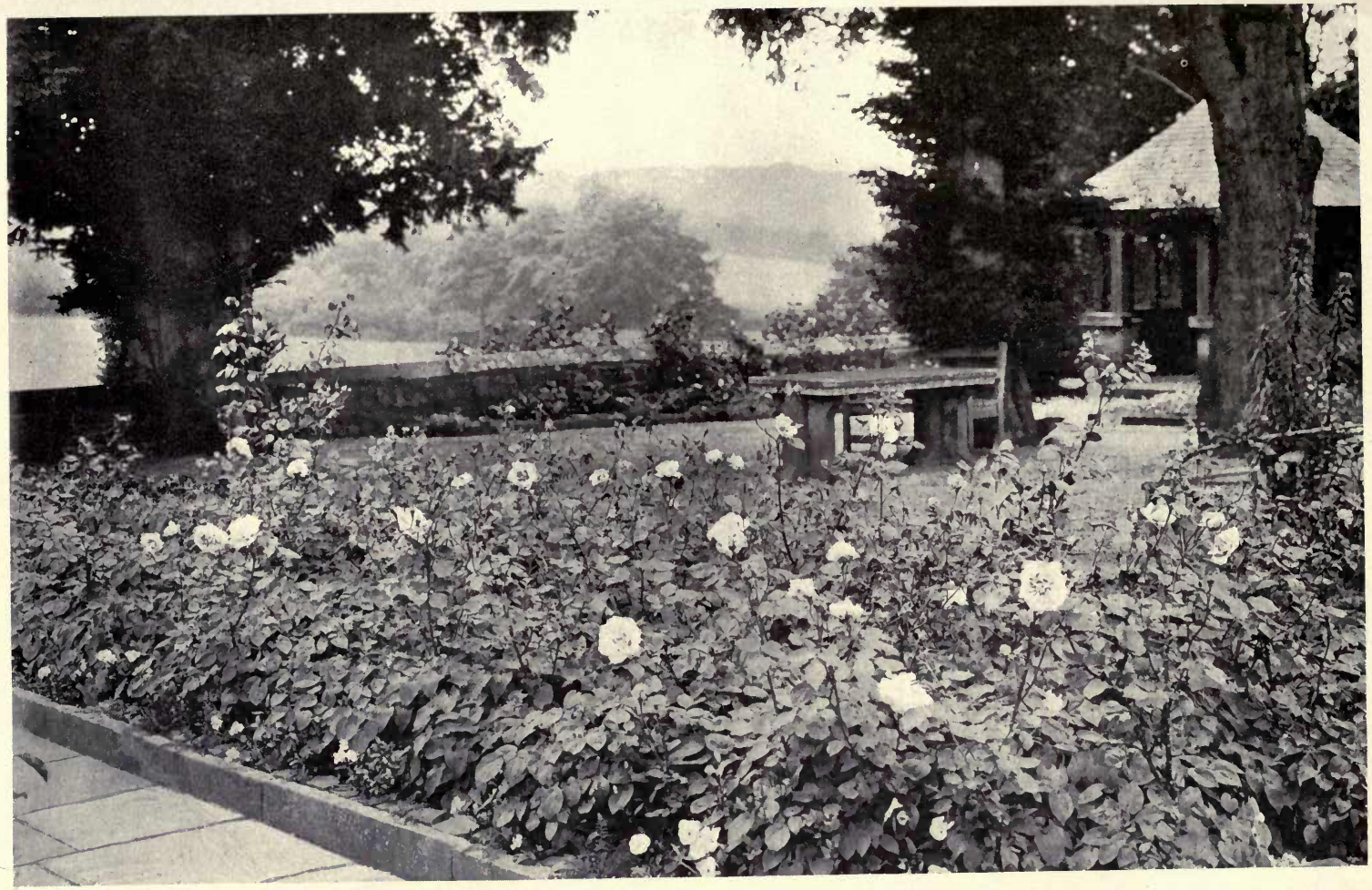
But for those who cannot adapt this idea to their own gardens can anything else of an encouraging nature be said? Heaven knows we need encouragement, for we spend more money on roses than on all other plants put together, and have mighty little to show for it. The Pacific Coast, of course, can grow roses to perfection, and parts of the South can do wonders, but the North finds rose culture the costliest and least satisfactory department of gardening. No beginner will believe this. Every year we hear of immense new rose gardens, and of amateurs who are going to make roses "a life study." But ninety-nine out of a hundred drop out after a few years. They love the rose just as much as ever, but it costs too much to get large double roses. There are *dozens of other flowers that will give a better show for the money.* So these incipient rose specialists become plain lovers of gardens and hardy plants, which is probably the best thing that could happen for all concerned.

It may be only a negative and Pharisaic satisfaction, but we certainly do not sacrifice as much for mere size of flower as the English do. They say we are constantly talking about "big" things, but at least we do not have in our flower shows thousands of individual roses, each with a stem three inches long, and exhibited on "boards" in serried ranks. Of course, they have informal and artistic arrangements, too, but for many years the dominant idea in English flower shows has been the false and degrading practice of exhibiting big individual blooms on short stems. I admit that this system is absolutely necessary for the study of technical perfection, but it is grossly misleading because,

in most cases, such blooms are the results of peculiar and costly methods which the ordinary public cannot use. Therefore, when people crowd to the front to note a new variety at the shows they are only preparing for disappointment. Moreover this horrid method of exhibiting flowers degrades the public taste, because it makes English amateurs ignore garden effects and encourages them to grow roses in the vegetable garden or in places coated with manure simply to get big flowers to cut for the shows. It is an open question whether English shows have not done more harm than good. A better way to spread the love of flowers is for every one to visit one another's gardens, because the cast-iron standards of the florists cannot then tyrannize over us. However, this small comfort may be a fleeting one, since fashions change.

A surer basis for encouragement can be found in our climatic superiority with respect to climbing roses. True, we cannot yet produce the effect (shown on plate 43) of large double roses blooming all summer on house walls up to the second story, but even now we can make a bigger show in June with small roses in large clusters (the sort of thing pictured on plate 44). For the three great Japanese roses seem better adapted to our climate than to that of Europe. They give us more and better foliage than any European species ever can; they are less troubled with insects, and require less care than large, double roses. The many-flowered rose (*Rosa multiflora*) has already given rise to the Crimson Rambler, of which more plants have probably been sold, it is said, than of any other rose ever introduced. The memorial rose (*R. Wichuraiana*) gives us foliage that retains its glossy beauty a good part of the winter. The Ramanas rose (*R. rugosa*) gives us the best bush and the best foliage of any rose in the world.

With these as a foundation we can build *two American types*



LET US GIVE UP PRETENTIOUS ROSERIES WITH THEIR BRIEF PERIOD OF POMPOUS DISPLAY. WE NEED GARDENS THAT ARE FULL OF POETRY, ROMANCE, INSPIRATION, LIKE THIS ONE OF MR. ROBINSON'S, OR LIKE MR. AARON WARD'S AT ROSLYN, LONG ISLAND. *See Page 103*

UNIVERSITY OF MARYLAND

46

A DECORATIVE WAY OF GROWING GREENHOUSE CLIMBERS WITHOUT SHADING TOO MUCH THE FLOWERS BENEATH THEM. THE EFFECT COULD BE MADE EVEN MORE PICTORIAL. *See page 110*

or races of roses. We shall have *bedding roses* in every colour, that will bloom from June to frost, thus giving us the longest season of bloom for the money. The first of these is Baby Rambler. We shall have *climbing roses* in every colour, that will sacrifice individual size of blossom to such an extraordinary mass display as the large roses can never hope to give. The first of these is Crimson Rambler. So I would urge every amateur who wishes to prove his devotion to the rose to raise new varieties by hybridizing in order to hasten the day when American roadsides, shrubberies, and gardens will be abloom with roses. For every one who has a yard and the love of roses in his heart can help. It takes three years for seedlings to develop their true character, but what of that? Three years pass quickly if one has a garden, and after that there is something new every year. And there are no mysteries about it. The elements of the problem have been outlined above. Bailey's "Principles of Plant Breeding" will put you on the track for everything else. Our prairie rose (*R. setigera*) will also help us in this great work of creating an American type of climbing rose and an American type of bedding rose.

But there is a longer and even more important task before American hybridizers, for the culture of large double roses is in a most unsatisfactory condition. It always will be while they have to be grafted or budded on a foreign stock, for the stock is always stronger growing and sends up suckers that kill the choice varieties. Of course, the skilled amateur can always prevent this by watching daily for suckers and removing them before damage is done, but the beginner does not know about this, and we want roses for the million. The ultimate ideal is to have every rose grown on its own roots, in order to do away with the sucker nuisance. And hybridizers must make thousands of combinations between rugosa

hybrids and the tea hybrids, because the rugosa makes the best bush, has the prettiest foliage, and is the most resistant to insects and diseases, while the tea rose is the only species that blooms all summer. There are only two traits that we want from the perpetuals or European roses — the deep colours and richer perfume. Everything else the European roses have to give us we must get rid of — their ugly habit, inability to withstand insects and diseases, cabbage-like flowers, and short season of bloom. It is a glorious game for American amateurs. It may need two centuries of work to get big, double, ever-blooming roses in all forms, colours, and odours, but it may be only twenty years until we have hybrid teas in all colours that will be hardy enough for all but the northern tier of states.

What can we do while waiting? Buy the costliest plants, in preference to the greenhouse-grown-and-sent-by-mail plants. The leading American rosarians will grow only imported roses that have been budded in the open. We can get our varieties "worked low" on the Manetti stock (which is an almost unmitigated curse in England, but not so bad here) and then give the varieties a chance to become independent of the stock. To accomplish this, set the plants two or three inches lower than they were in the nursery, so that roots may come from the stem above the union. Also scrape a little off the lower part of the stem to facilitate the escape of roots above the union. Arsenate of lead will positively save a great many flowers from the rose bug if you keep the foliage covered with it practically all the time the bug works. True, this is unsightly, but there is an equivalent preparation that is inconspicuous. On sandy soil the bug can be controlled only by using this treatment and buying varieties that are worked upon the brier. Other improvements in the ceaseless warfare we must

get from books, magazines, experience, and visits to other rose gardens.

And, finally, we can all cherish in our hearts *the ideal rose garden.* The most perfect garden I have seen is that of Mr. Aaron Ward at Roslyn, L. I. There are about five hundred varieties in it, but it is not a mere collection of varieties. We can never have the best effects by growing only one bush of a kind. It is impossible to get a beautiful photograph of a rosery because of its countless stakes and labels. Mr. Ward has no stakes or labels, but it is easy to find the name of any variety, for a little beyond each bed is a chart of the bed, typewritten, under glass and raised to a convenient height. The whole device is easily removed, so that guests may roam about the garden without anything of a prosaic nature to drag one down to the earth. The whole atmosphere of the garden is one of romance and beauty. The roses are surrounded by other hardy flowers, and the garden is secluded.

I do not deny that the rosery gives a bigger show during June and July, and I am not urging every one to give up growing roses for quality blooms. England can teach us everything about quality roses, just as we can teach her everything about greenhouse roses. Indeed, Mr. Barron complains that Americans are afraid to prune their roses enough to get the best individual flowers. The only point I am urging is that we ought to give this new scheme of rose culture a trial because we need gardens that are full of poetry, romance, inspiration. (See plate 45.) And we cannot have such gardens without the best roses grown in the noblest ways.

If the student desires more practical help than this chapter can give let him read Mr. Robinson's chapter on roses in the

"English Flower Garden" and study Mr. Ward's methods in "Roses and How to Grow Them," a volume in the "Garden Library." Also he will find an invaluable article called "Hardy Roses from May to November," by Mr. Leonard Barron, in *Country Life in America* for March, 1908, pages 491 to 494.

INDOOR GARDENS

CHAPTER XI

INDOOR GARDENS

The fun of having the best fruit, fresh vegetables all winter, and flowers the year round — The pleasure of collecting — A cheap greenhouse at last

THE English people seem to get about one hundred times as much pleasure out of greenhouses as we do, and it is possible that they always will. For they have agreat climatic advantage over the people of the northern United States in the mildness of their winter, which has a delightful effect upon one's coal bill. If you add to this that labour is cheaper there than here, and that every one is interested in gardening, there can be little wonder that everybody seems to have a greenhouse. The mere fact that a greenhouse enables a family to enjoy gardening the year round — and especially during the five months when trees are bare — would account for much.

But the English have one powerful incentive to greenhouse building that we do not have. They cannot ripen peaches or melons in the open air, and even grapes and plums have to be grown against walls or under glass in order to get enough sunshine to ripen them. The appeal to the stomach is deeper seated than the æsthetic sense and the English are blessed with a sturdy interest in the simple joys of eating. The first step they took to get fruit was to build high walls to keep out thieves. Then they found out that better fruit could be grown against these walls than in the open. And, when some genius discovered that the finest fruit of

all could be grown under glass, there were thousands of miles of brick walls all ready to be turned into greenhouses, simply by adding glass on one side. Consequently there are hundreds of miles of lean-to greenhouses in England which are devoted to raising fruit. In many of these no heat is needed until March, and then only enough to keep out frost — say a temperature of 40°. Truly, the English are in luck.

The most wonderful thing, however, about greenhouses in England is the *great number of small ones* you see everywhere and the obvious comfort and pleasure they give. There are no accurate ways of measuring such things, but it is certain that the greenhouse is not considered a "rich man's game," as it is here. It is almost a moral certainty that every Englishman who can afford a greenhouse is bound to have one. And I judge that every Englishman who can afford a piano can also afford a greenhouse.

We shall come to this, too, for I am happy to say that the *era of cheap greenhouses has really begun.* You can now buy a greenhouse for $250, the price of a fair piano. You could have a good deal of pleasure with it at a cost of $50 a year. The average family will spend a great deal more than that on piano lessons and music. The $250 greenhouse I have in mind is about seven by nine feet and includes not only the foundation but the heating plant. It is portable and can be taken away by a tenant. It is of good construction, attractive inside and out, and without a particle of foolish ornamentation.

What can you do with a greenhouse? About a dozen good things.

1. You can force fruit or vegetables to maturity out of season.

47 A PICTURE OF THE TROPICS. DATURA, WITH TRUMPETS A FOOT LONG. ALMOST EVERY ENGLISH GREENHOUSE PRIDES ITSELF ON SOME "OLD PIECE," I. E., A TREE OR SHRUB GROWN TO GREAT SIZE. *See page 110*

48 A NEW KIND OF WINTER GARDEN INVENTED BY MRS. STEWART, OF GLEN RIDGE, N. J. INSTEAD OF NARROW WALKS AND RAISED BENCHES IT CONSISTS OF A LAWN BORDERED BY FLOWERING TREES, SHRUBS AND BULBS. A LIVING ROOM, NOT A DAMP, HOT PLACE. *See pages 112, 113*

2. You can gain a month or more on the outdoor season by starting vegetables indoors.

3. You can produce flowers for cutting.

4. You can grow plants for decorating the house.

5. You can grow flowers for exhibition and competition.

6. You can use your greenhouse as a hospital for house plants that are out of order.

7. You can winter tender plants, such as geraniums, and all bedding material.

8. You can make your garden bloom a month earlier by starting flower seeds indoors.

9. You can make a collection of your favourite flowers and go in for plant breeding.

10. You can make the greenhouse a reminder of the tropics, or at least a bright and pretty picture.

11. And, finally, you can make the greenhouse, to some extent, a living room.

Not all of these things, however, are possible in any one house. The first nine purposes are practical, the last two are artistic, and the two groups conflict. If you want your greenhouse to be a factory it cannot be beautiful all the time. If you wish your greenhouse to be a living room, or a picture of the tropics, you must not crowd it with plants. Indeed, *overcrowding* is the worst feature of American greenhouses. They are rich in species, but poor in pictures. The specimens do not have room enough to develop and plants demanding radically different temperatures and treatment are put into the same house. You cannot grow roses and carnations together; they must have separate houses, or separate compartments. Our besetting sin is attempting too much. We do not give the gardener a fair chance.

I am sure that greenhouse owners do not realize how many different purposes are covered by the same roof and how much these different aims conflict. Do you own a range of greenhouses? If so, may I make a suggestion? Take the list of eleven purposes mentioned in a preceding paragraph and go over it with your gardener. Assign roughly the per cent. of space you are willing to give to each purpose. Then go into your greenhouses and you will see them from a new point of view. Ask your gardener where the shoe pinches. This scheme will help you decide what to throw out and how to get more pleasure from what you have. You cannot enjoy *pictorial* effects (see plates 46 and 47) without purging your greenhouse. And you must decide for yourself whether you want *a plant factory, a picture of the tropics, or a living room.*

Perhaps my reader does not know these three types of greenhouse, and perhaps, therefore, he may not understand why they clash. Well, then, any florist's rose or carnation house is a *plant factory*. There is not a particle of romance in it. Every line of it means business. It exists solely for cut flowers. In this type of work America excels England, but it is no great credit to us. A few years ago the American people spent more money on cut flowers than on plants. The English love to *live with plants the year round* and so shall we when we learn better. Meanwhile, the first thing an American usually thinks of when he plans a range of private greenhouses is roses and carnations — the very things in which he cannot expect to compete with professionals who grow them by the hundred thousand. It is all well enough to grow a few roses and carnations, but to have no other idea of using greenhouses shows a deplorable lack of imagination.

Now *a picture of the tropics* is a very different thing. To step

into the largest house at Kew is to enter a new wonder world. For there you will see all those great features of the tropics that have for centuries amazed the minds or stirred the hearts of mankind. You will see great palms and monkey puzzles towering up to a height of fifty feet or more, bananas bearing their fruit in huge bunches, the traveller's joy with its hidden cups of water, pitcher plants with insects drowned in their alluring cups, orchids that feed only upon the air, the bird-of-paradise plant with its undreamt of colour scheme, the marvellous Madagascar lace leaf and such deathless forms of beauty as the papyrus plant, the sacred lotus rising above the water, gorgeous blue water-lilies like those that floated upon the Nile and the orange tree producing simultaneously its fragrant bloom and richly coloured fruit. A greenhouse of this kind is mysterious, enchanting, full of moods. Of course the illusion is not complete, but nevertheless it is the "real thing" because it presents the spirit of the tropics in forms that powerfully stimulate the imagination. (See plate 47.)

How different from all this is the *conventional hot-house* in America. It may have all the plants I mentioned, but the *spirit is gone.* Everything of natural grandeur or world-old charm is crowded by a host of modern interlopers which make no appeal to the mind — only to the lust for show. I refer to gaudy foliage plants like crotons, dracænas, and variegated kinds of pandanus —the veriest weeds of the tropics. There is an endless feast of colour, form, and texture in ferns alone without going outside of nature's leaf colour — green. Palms, too, would be a delight if we ever gave them room enough to show their simple majesty. But everywhere the unconscious aim is to fill a greenhouse with the *showiest plants that have the longest season of showiness.*

There is nothing wrong in foliage plants as such. The

aspidistra, the sanseviera, the cyanophyllum, the marantas, and many of the anthuriums have something beside mere brilliancy of attire; they have some native refinement, dignity, charm, or personality. The only wrong thing is to make foliage plants the dominant feature of a greenhouse — to *substitute dress for soul.* If you are tired with the day's work, it will rest you to wander silently among the gigantic shapes of the tropics. But there is no spell of enchantment in a house dominated by rex begonias, for they smack of the milliner's window at its worst. There is no "universal element" in cheap variegated plants like *Vinca major*, wandering jew, acalyphas, coleus, abutilons and what an Englishman would describe as "all that sort of rot." They do not feed the soul.

The soul, however, cannot be soaring all the time, and for practical, every-day purposes the *living-room type of greenhouse* may be the best. The oldest way of satisfying the craving to live amid flowers in the winter is to have a *conservatory*, *i. e.*, a living room to which plants in their perfect state are brought from a greenhouse where they have been raised and whence they return after their beauty is past. But a conservatory usually lacks the sincerity and charm of a place in which every stage of a plant's life is spent. And I can think of nothing duller than the respectable conservatories that one sees in America's greatest cities. There is one in New York which a friend of mine calls "the morgue." It has cold marble walls, and contains not a solitary flower —only the regular florist's "truck," *viz.*, rubber plants, Boston ferns, and the commonest palms. These are estimable plants in their way, but they are done to death and against walls of white marble they stand out with almost funereal blackness.

How much cheerier and inspiring is Mrs. Stewart's *indoor*

49 THE FAMOUS COLLECTION OF ROSES AT KEW, A FAVOURITE RESORT FOR ARTISTS. IT HAS SOMETHING MORE THAN RARITY, VIZ., PICTORIAL QUALITY. THE BIG OPPORTUNITIES FOR ROSE IMPROVEMENT ARE SKETCHED ON PAGES 101 AND 102.

UNIVERSITY OF CALIFORNIA

garden at Glen Ridge, N. J.! (See plate 48.) Fancy a room about fifteen feet square, with real grass for a floor, and a border of earth out of which grow bulbs, shrubs, and even young magnolia trees as naturally as out-of-doors. There is no hot, steaming atmosphere and there are no artificial benches or narrow concrete walks. You may walk on the lawn as freely as outdoors or sit in a chair upon the grass and listen to the birds singing overhead, while you look out through the glass sides of the living room upon a world of snow! No wonder this is the most popular living room in the house! And to think that all this can be had for only $1,000 or $1,500!

"Very fine," you may say, "but what has England to do with all this?"

"Nothing at all," is my cheerful reply. England may have a great many important lessons to teach us about greenhouses. If so, I missed them all. In manners and customs and all the externals of life the two countries are steadily growing farther apart. In every department of gardening England's message to us is: "Do not copy the beauties of other countries; study your own needs and adapt your own materials to those needs."

England's greenhouse problems were three: to raise th best fruit, to harmonize the greenhouse with existing architecture, and to perfect the small, cheap greenhouse so that everybody could have one. Those problems she has solved.

Our great job, it seems to me, is to develop the idea of *livability* in greenhouses. The American people are "long" on ingenuity and "short" on repose. We work harder and longer than Europeans and, therefore, we need something in addition to active sports. We need to relax. There is no relaxation in the ordinary greenhouse. One merely wanders through it with a

bunch of friends to see a lot of unrelated objects that are on exhibition. But Mrs. Stewart's living room is a place to loaf and invite the soul. This, then, seems to me the *first great contribution toward an American style of greenhouse.* (It is fully described in *Country Life in America* for December, 1907.)

The *second important adaptation* of the greenhouse to American life has been made by Mr. Warberg, of White Plains, who has combined the idea of *a greenhouse and swimming pool.* For Americans are certainly fond of bathing, and swimming pools for summer use are common among the rich. Why not, then, cover the pool with glass and use it the year round? And why not cover the walls of the greenhouse with beautiful tropical vines? Thus the different members of a family may enjoy a swim before breakfast, not only in complete privacy, but amid a scene of beauty.

The *third* great American idea was contributed by the late Samuel B. Parsons, in a book called "About Gardens." It is to cover all the roofs in a great city with gardens of glass. These, he thinks would furnish ideal playgrounds for children in the winter. Such greenhouses need not be an added care to the family, for the florists would supply caretakers. In the summer, when the house is shut up, the plants could be sent to the florists. If the paterfamilias has to pass a night at home he could open the ventilators and sleep in the greenhouse. Mr. E. H. Harriman had on the roof of his New York house an outdoor sleeping room which was a sort of greenhouse.

The *fourth* idea we are bound to develop is to build a house around a garden and cover the garden with glass, as Mr. J. H. Wade has done at Thomasville, Ga. The Spaniards have perfected the *patio garden.* It remains for us to adapt it to a country that has zero weather in winter.

I could give other examples of originality in greenhouse construction, *e. g.*, Mrs. Thompson's aviary which has a tree in it, but unique things, and things that are only for specialists, are not helpful, as a rule. The important thing is that which suits thousands or even millions of people. Originality in England has often exercised itself in making grottos in greenhouses, with all sorts of coloured lights and surprises. There is nothing in that line of effort worth while. The one problem, in which American originality should do its best, is the most democratic of all — the cheapening of the greenhouse so that everybody can have one. Already we have a portable greenhouse for two hundred and fifty dollars which will not fall down when you breathe hard, or rot to pieces in ten years; and I hope for even better things.

Hitherto greenhouses have been such ugly things that owners of country places would not have them near the house. In England, greenhouses are made to harmonize with any style of architecture, but at great sacrifice of the sun's rays. The American houses, I believe, are the lightest on earth. A few years ago the panes of glass were only eight inches wide; now they are twenty-four. That awkward elbow has been abolished and snow can no longer darken a house. Inside one of the new houses there is nothing to break the sweep of vision or shade the plants. We have evolved a type of greenhouse far brighter and cheerier than any I saw in England. Its expression is *efficiency* — a solid feeling of permanence, combined with a smiling and inviting exterior. The character of it is unmistakably American. It remains only to bring the workshop and vestibule into harmony with domestic architecture.

There is one English idea, however, that we can import bodily with profit, and that is the "fun of collecting." The

English are a nation of collectors and hobby riders, and I feel it in my bones that we shall become so. The passion for completeness is in our blood. Orchids are the great favourites with English collectors, but many people like to have a general collection. There is no accounting for taste. Some people run after pitcher plants, some want a hundred kinds of chrysanthemums and some yearn after every variety of begonia. The greenhouse enables every one who has the collecting spirit to become a world-authority, or at least a local oracle on his specialty. And the crowning joy of the collector is the production of new and improved varieties. No matter how hardy a plant you may work with you will want a greenhouse to propagate your precious seedlings. It is not impossible that the first red daffodil will open in a $250 greenhouse and even a seven by nine feet structure is large enough for a reasonably complete collection of amaryllis — those gorgeous plants shown on plate 52.

50 AN ASTONISHING COLLECTION OF ALPINE FLOWERS, AND A REPRODUCTION OF THE MATTERHORN ON A SCALE OF SEVERAL ACRES. SIR FRANK CRISP'S GARDEN, FRIAR PARK, HENLEY, FOR DESCRIPTION OF THIS GARDEN, SEE PAGE 65. *For pictures see plates 27, 29, 30, 79, 81, 82*

NEW VARIETIES

CHAPTER XII

COLLECTING AND MAKING NEW VARIETIES

The sort of work that Luther Burbank does with flowers is commonly done in England by amateurs — Let us collect every variety of our favourite flower and then improve it

NEARLY all the "good fellows" in America who like a garden have their fling at making a big collection of something, *e. g.*, every kind of rose, lily, peony, or iris. Heaven forbid that I should try to discourage this amiable weakness, for the object of gardening is to refresh our souls, and if we take everything with equal seriousness we may miss life altogether. There will always be some who find the mere act of collecting worth while. For, though you may be unable to grow fifty kinds of lilies, you are likely to find one variety that means more to you than all the others, and it is the irony of fate that you may search the books in vain for any hint of the peculiar charm of that lily — a charm which is so obvious to you and to all whom you admit to your garden.

But while I do not quarrel with you for thinking only of what *you* get out of it, the thing that interests me is What does *humanity* get out of it? If you had turned over practically every important book and magazine on gardening published between 1787 and 1900, as I have, I fear you would reply, "Nothing but a million articles that dispute about Latin names and a bunch of books that describe the hairs on the leaves." For the bold truth is that horticulture does not even get a decent set of records out of all this

collecting. All the life and "fun" seem to be left in the garden. For even if collectors themselves write the books they seem to have an infallible instinct for omitting everything of human interest. Do they ever tell why one variety costs ten times as much as another — and is worth it? Or what are the great improvements to be made in any group and how they might be secured? Do they not rather swing the censer before the dull god Botany, grinding out technical descriptions (which have been better done a hundred times before) in order to "show the gardener his place," or get a reputation for profundity by the cheap and easy route?

I do not say that collecting must lead to snobbery, extravagance, selfishness. Those are excesses. On the contrary, collecting, guided by a spirit of moderation, leads to higher forms of knowledge and pleasure. So I say, "Go ahead, order your fifty roses, delphiniums or what not, and God bless you!" But while you are waiting for the plants to come from Europe, let me show you how you can get far more pleasure out of that collection than you might ever suspect. For the day may come when you will be tempted to throw away most of those varieties and never collect anything again. You will chafe at the endless bother and expense of maintaining a big collection; you may even tire of being a little tin god in your own locality. At first it thrills one's spinal column to be pointed out as "the man who can name a hundred varieties of dahlias." But you soon find that there are thousands of other people who can name a hundred varieties of something. This intellectual prowess, which once dazzled you, is now seen to be only a cheap patter that any amateur acquires after a single season with his collection. And, worse than all, you see that mere collecting is not an end in itself.

51. A GARDEN OF IRISES AT KEW. THIS WILL SHOW ABOUT WHAT ONE MAY EXPECT TO HAVE NEXT YEAR BY ORDERING NOW FIFTY VARIETIES OF GERMAN IRIS — A DOZEN OF EACH KIND. WHILE YOU ARE EXPERIMENTING IN PLANT BREEDING, YOUR GARDEN NEED NOT LACK BEAUTY OR INTEREST.

The better point of view will be apparent if we inquire why the books do not tell what real inducement there is for you to part with five dollars for any rare species, when you can buy the common species of the same genus for fifty cents. It will not do to say that *rarity* alone accounts for costliness. There may be a thousand rare species of ragweed, but nobody would give a cent to grow them. Every rare species that is offered for sale is supposed to be *better* in some one respect, than anything else in cultivation, or if not better it has some different human interest, wholly aside from its botanical rarity. The chances are that it is also *inferior* in some important respects to something that is already in common cultivation. But the all-important point is this — the rare species offers *a chance for progress.*

And now the secret is out. For all of us would like to make the world better, and the keenest pleasure in life is in creating — not hoarding. Therefore every one of us who makes a collection of plants ought to go a step further and produce some new varieties that will add to the world's pleasure. The collector has a great advantage over others, since, as a rule, it is only by making a good collection that one can perceive *what the world really needs.* For example, if you collect perennial larkspurs you can hardly escape realizing what the next great improvement in that group must be, *viz.*, a disease-resistant stock. But if you were to judge by books you might think that we ought to concentrate on the red, orange, and yellow larkspurs, so that these might be made easy of cultivation. That problem, however, can wait. For what use are any larkspurs if they are all doomed to be disfigured by the black spot and eventually killed?

Can any one tell me why thousands of Americans order collections of plants, while only one or two will try to grow new

varieties from seeds? "Too hard," you will probably reply, or "Not time enough." One might as well say that base-ball is too difficult to learn, or that it takes too long to bring up a child. In England many, if not most, of the important improvements among ornamental plants are made by amateurs. And we will surely come to such a state. Nothing can stop it. It is not a case of duty. As soon as we get the idea that we are missing the best "fun" of all, we will tumble at it head over heels.

Just to illustrate what one amateur can do, take the case of the Shirley poppies. All the Shirley poppies in the world are the descendants of one wild poppy which was saved by an English clergyman in 1880. In about ten years he had secured practically all the dainty colours and markings we know to-day, and had succeeded in eliminating all trace of black or purple from the flower. Then he gave (he did not sell) the product to the world, and for twenty years he has had the pleasure of knowing that Shirley poppies are grown and loved in every good garden the world over. That was "fun." The same sort of thing has been done over and over again, and it need never involve any painful publicity, such as Mr. Burbank has to endure. For example, most people do not know who originated the Shirley poppies, *viz.*, the Rev. W. Wilks.

Again, the daffodil (which is the most popular bulbous flower in England) has been improved chiefly by amateurs. Yet it takes about seven years from seed to flower and eight years more to propagate enough bulbs to distribute — fifteen years in all to produce a new variety! We Americans do not, as a rule, know where we shall be living fifteen years from now. That's where the English clergyman has the advantage over us. But his advantage is usually much exaggerated. For any renter can arrange with

52 A COLLECTION OF AMARYLLIS OR HIPPEASTRUM — GORGEOUS FLOWERS SIX INCHES ACROSS IN BRILLIANT SHADES OF RED, OFTEN MARKED WITH GREEN, AND SOMETIMES NEARLY WHITE. *See page 116*

his landlord for the removal of his seedlings. Even if the bulbs cannot be touched when the family leaves, they may be safely left till the proper time for transplanting. And the idea of waiting fifteen years for a new variety is a bogie that has no terrors for an experienced gardener. You do not hold your breath all that time. A thousand seedlings will generally occupy only one bed, or a single corner. The rest of the garden is hardly devoid of interest all those years.

I dare say some of my readers will be intensely disappointed when I say there is nothing miraculous in the whole process. Mr. Wilks tells us that there was no hybridization involved in the production of the Shirley poppies — only selection. He merely found one poppy that had a white edge, sowed all the seeds of that plant and, out of two hundred plants, got four or five that had edged flowers. He saved the seeds of these and kept on, sowing and saving, until all the colours came of their own accord. That is the way nine tenths of all the progress has been made with grains, fruits, and vegetables. Nature produces the good things and we merely save them. If you should call Mr. Wilks a "wizard" he would have a right to be deeply offended, for no man likes to have people think him a charlatan.

But even the act of hybridization is shockingly simple. You take a little pollen from one species of flower and put it on the stigma of another flower of a different species. If you are very lucky you will get some good seeds. The rest is the same story over again — pollinating, seed sowing, throwing away the worthless and saving the best. To suppose that Mr. Burbank, or any other plant breeder, has secret methods or superhuman skill is childish. The only reason people think so is that Mr. Burbank has been exploited by newspaper writers and indiscreet friends who know

nothing about gardening. Every plant breeder whose work I have seen knows some facts that no one else knows, and he has also refined certain methods. But so has every glue manufacturer and shirt stitcher. A hundred years ago gardeners tried to keep the art of grafting fruit trees a trade secret, but it is in every book now. Nothing of the first importance in horticulture can be kept secret nowadays. No professional possesses methods or skill that any persistent amateur may not attain.

Indeed, the amateur has certain advantages over the seedsmen and nurserymen, who produce so many novelties. As a rule, an amateur has more time and freedom, while the tradesman has to let many opportunities pass, or even suffer his seedlings to die of neglect.

Again the amateur can usually attack the work with freshness, whereas the tradesman's imagination is fatigued by mere thoughts about selling plants. In the third place, the amateur has a keener appetite for books. When a man who gets his living by growing plants goes home he is generally too tired to study the scientific side of gardening. But to a man who sells stocks all day, the plant world offers a rest and change. Now, imagination and study are at least three fourths of the battle. The rest is only technique or routine. Plant breeding is a very poor business, but as a life-long hobby it is perfect.

Every beginner of to-day will naturally wish to copy Mr. Burbank's methods, because our newspapers tell us he has "done more for mankind than all the plant breeders who have ever lived." But this is only American "hot air." If you wish to measure a man's work by millions of dollars, consider the vast beet-sugar industry of the world, which is chiefly due to Vilmorin's work in increasing the sugar content of the beet. Or take our

53 ONE OF THE PRETTIEST AND MOST INNOCENT FORMS OF COLLECTING — A BORDER OF HARDY PERENNIAL FLOWERS. HERE ONE MAY INDULGE A PASSION FOR RARE PLANTS, BUT COMPLETENESS IS IMPOSSIBLE. AND IS NOT PICTORIAL EFFECT BETTER THAN COMPLETENESS?

See page 36

biggest crop — Indian corn (worth $1,615,000,000 last year), and consider the work of Hopkins and others in breeding maize. Or take Hays's work with wheat. Any of these might be figured as more important to humanity than all of Burbank's work. Again, the newspapers fail to mention that many of the famous Burbank things Mr. Burbank never pretended to "create." He merely bought and introduced them like any other nurseryman. He would be the last man to contend that such disseminations were to be compared with the steady output, for half a century or more, of the great foreign houses, such as Haage and Schmidt, Benary, or Vilmorin, or any one of half-a-dozen big seed houses in the East that you know. Even the original Burbank boomer, Professor Wickson, once wrote me that on the Pacific Coast, where Burbank's plants do best, his work had not affected commercial horticulture to the extent of 1 per cent. of the value of horticultural crops. All this is no reflection against Mr. Burbank — only against the newspapers. Mr. Burbank is a great man. It is not his fault that his introductions are of trifling value in the East. Climate is responsible for that.

But, granting that Mr. Burbank's results are more important than those of all the plant breeders who have ever lived, it does not follow that his methods are the best for the amateur. For then we should have no records that would help others. Mr. Burbank himself deplores the fact he has kept no records of scientific value. For this is the sort of thing he does. He shakes a plum branch over another plum tree that is in flower and all the fruits that form on that tree he saves, and then plants their stones. But is there any evidence that any of those plums is a hybrid? Not the slightest. For that plum tree would have made hundreds of fruits without the waving of that branch. And no one can plant a

thousand plum pits without getting remarkable variations among the resultant fruits. The same is true of all other fruits and seeds. So if you propose to raise new varieties in this way, I bid you good-bye, for I consider that a very dull form of gambling. The only reason why some tradesmen still use so blind a method is that they possess one advantage the amateur does not have, *viz.*, plenty of land and facilities for raising seedlings on an enormous scale at little cost. But even then it would be quicker and surer to employ a scientific plant breeder.

The scientific way to hybridize is this: First, remove the stamens before the flower opens. Second, put a bag over the flower so that bees cannot touch it. Third, when the stigma is ripe, bring to it pollen from a flower of another species. Fourth, record what you have done. Is this asking too much? English amateurs do not think so. It is about as much trouble as playing golf and keeping your own score. Only by studying such records has the world made its recent phenomenal progress in plant breeding. For instance, an Austrian priest named Mendel hybridized some garden peas and discovered a law which is of the greatest practical benefit to plant breeders of anything since Darwin's time. You will find all about it in Professor Bateson's paper called "Practical Aspects of the New Discoveries in Heredity" in the "Proceedings of the International Conference on Plant Breeding and Hybridization," published by the Horticultural Society of New York.

More than half the battle in plant breeding is to find out whether the thing you propose to do is worth doing and whether it has not been already done. However, the amateur plant breeder has one great advantage over other inventors, *viz.*, he can always find out, if he is persistent, what the world needs most. For

instance, there is an amateur mechanic in Detroit who got one thousand dollars for making a capsule machine during hours of leisure. But he could never have known that there was a market for such a thing if a friend had not taken him into confidence about his business. Now an amateur in gardening can find out what the market needs simply by collecting all the varieties of his favourite flower that he can afford to buy.

A graphic way of proving this is to make a simple chart that will show at a glance the best varieties and the greatest opportunities. You have only to consider the two most valuable characteristics of your favourite flower. Sometimes these will be size of flower and length of bloom. In lilies, the important things are colour and form of flower. So you rule four lines for the four shapes of lily and six columns for the six most important colours. This makes twenty-four squares, but in the case of the spotted lilies you can only fill in six squares with the names of satisfactory varieties, while among the unspotted lilies there are seven gaps that need to be filled.* Thus any collector can, after a single season, get a clear idea of the most important improvements to be made and the most promising material for producing the desired varieties. Isn't that more effective than gambling? Isn't that cheaper than raising thousands of ordinary seedlings?

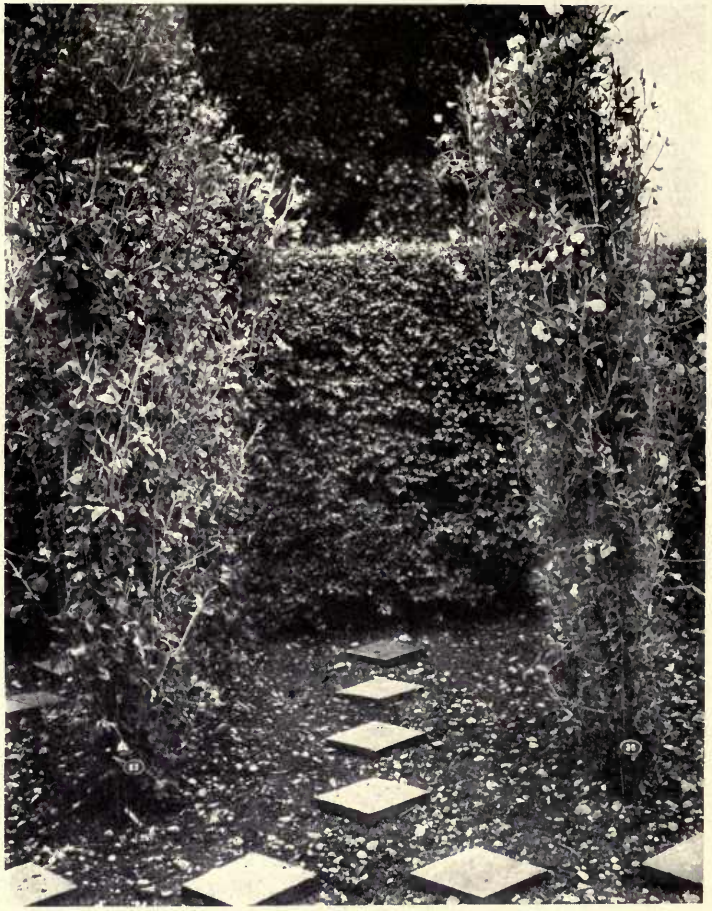
And isn't plant breeding the natural outcome and crowning pleasure of collecting?

Why not start now to improve your favourite fruit, vegetable or flower? The best way to begin is to get the latest edition of Bailey's "Plant Breeding" and collect all the varieties which it seems reasonable to buy.

*Any one who desires further suggestions about this method will find them in the *Garden Magazine*, Vol. III, page 28.

The highest ideals in collecting are exemplified by Mr. R. B. Whyte of Ottawa whose "Perfect Half-Acre Garden" was described in *Country Life in America*, April 1, 1911, pages 413 to 416. He cares little for a rare plant as such; it must have beauty or interest. He never desires a plant simply because no one else has it. He never takes pride in a plant because it cost a lot of money. His aim is to discover the best, and his method is comparative. How different from those orchid collectors who gloat over some ugly plant that is worth one thousand dollars simply because it is unique!

54 A BED OF SEEDLING CARNATIONS. A LADY IN GLOUCESTERSHIRE HAS BEEN WORKING TEN YEARS TO PRODUCE HARDY, SUMMER-BLOOMING GARDEN VARIETIES



A SECTION OF MR. SYDENHAM'S SWEET-PEA COLLECTION AT HARDWICKE, BIRMINGHAM, SHOWING THE NEAT IRON LABELS THAT FACILITATE THE KEEPING OF RECORDS

GARDEN CITIES

CHAPTER XIII

GARDEN CITIES

We can build small, new cities that are practically perfect, without philanthropic aid, simply by coöperation, and these cities may revolutionize the old ones

THE most perfect city I have ever seen or heard of is the famous "garden city" of Bournville, a suburb of Birmingham, England. I was simply transported by the healthfulness, happiness, and beauty of the place, and I believe it gives the people more for their money than any other city on earth. Any one who has cherished some noble vision of a glorified humanity would be intensely interested to see Bournville, for part of Bellamy's "Looking Backward" is here realized.

Can you imagine yourself living four miles from a city the size of Pittsburg in a suburban town of about three thousand inhabitants, where there are no saloons and never can be any slums, noise, dirt, crowding, factory smells, bill boards, or streets torn up for gas-lighting, or sewers? Wouldn't you like a chance to play golf, tennis, cricket, bowls, or hockey under ideal circumstances at a cost of a few cents a day? Wouldn't you be satisfied with the social life of a community that has splendid schools, churches, baths, gymnasium, meeting-house, and one tenth of its whole area given up to parks and playgrounds? Wouldn't you feel safer in a city where the national birth-rate has been doubled and the death-rate cut in two? And what would you say to a handsome brick house of seven rooms and a bath, with an eighth of an acre

already planted with fruit trees, vines, and lawn, at a rental of twelve dollars and thirty cents a month?

How can such superb opportunities be given at so low a cost? There are three ways, each of which is exemplified by a different garden city in England. The first is the plan of Lever Brothers, soap manufacturers, who built Port Sunlight, a suburb of Liverpool at a cost of $1,700,000. It is the most beautiful of all, has the greatest variety of buildings for social purposes, and the cheapest rents, but it has two serious drawbacks. First, the social life of a community having only one interest is not as healthy as that of a mixed community. The renters at Port Sunlight are all employees of the same factory, and the magnificent social features provided for their comfort and pleasure are not used as much as they ought to be. Second, the city has never paid its makers any direct dividend, although it is practically self-supporting. The Levers firmly believe that they have received an ample financial return in the increased efficiency of their employees. But we cannot expect that the city life of the world will be revolutionized by kind-hearted manufacturers. Port Sunlight is superb, but its plan implies too great an investment for the ordinary manufacturer and the returns are too indirect to appeal to the average business man.

Both of these defects are remedied in the plan of Bournville, which was founded by Mr. George Cadbury, the cocoa manufacturer. In the first place, only 41 per cent. of the renters at Bournville are employees of the factory. The others came from anywhere and everywhere, and many of them spend their days in Birmingham. Consequently the social life is that of normal, mixed community — not merely industrial or suburban. In the second place, Bournville really pays. The city's chief source of income is rent. Everybody pays 8 per cent. on the investment

55 EVERY FRONT YARD IN BOURNVILLE (NEAR BIRMINGHAM) IS AS GOOD AS THIS. EVERY HOUSE HAS A DIFFERENT DESIGN FOR ITS GARDEN AND A DIFFERENT SET OF CLIMBERS. THE ESTATE PLANTS THE TREES, HEDGE, VINES, LAWN AND FRUIT TREES. THE RENTERS DO THE REST

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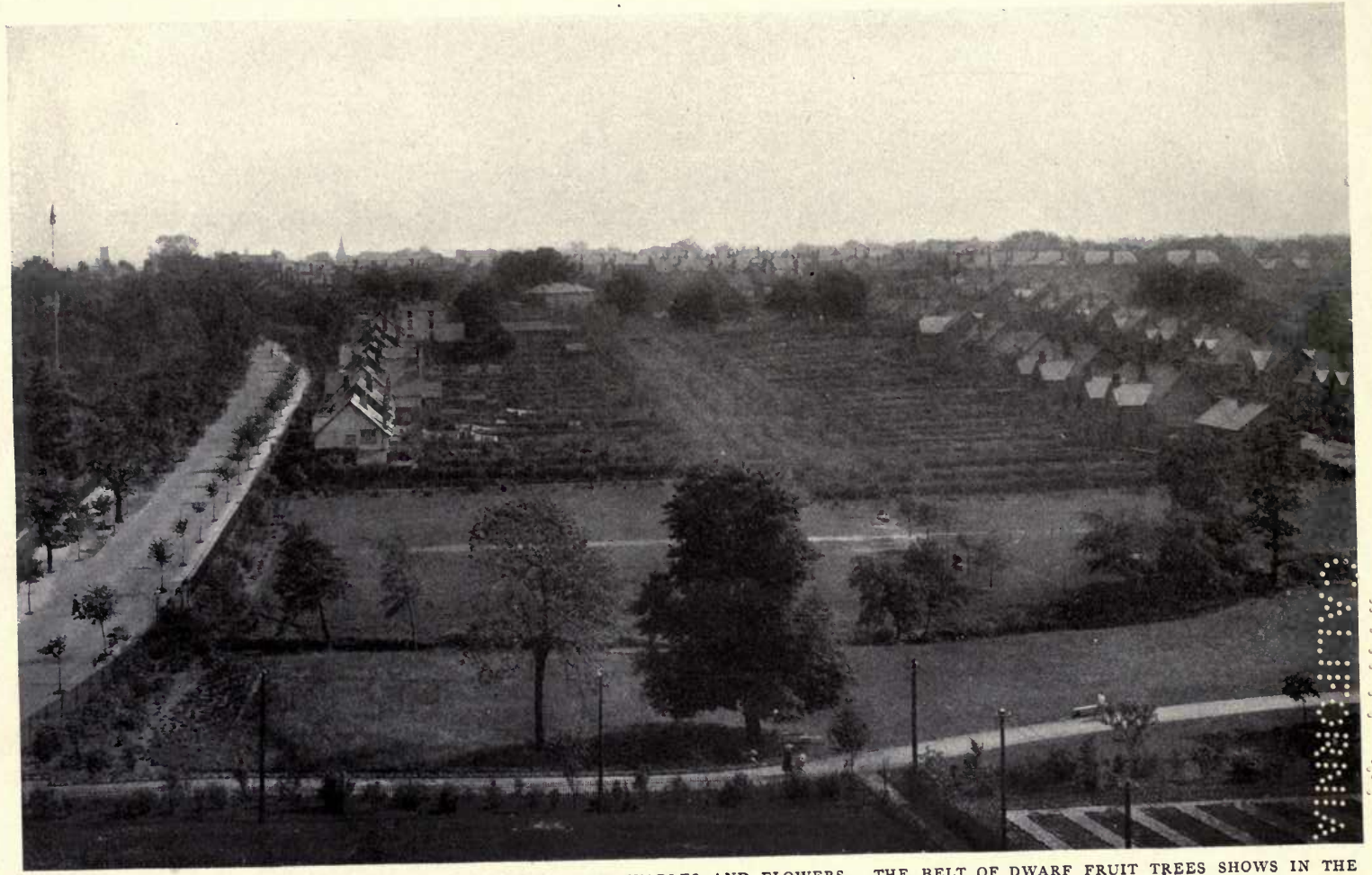
56 EVERY BACK YARD IN BOURNVILLE IS AS NEAT AND PRODUCTIVE AS THIS. NINETEEN GARDENS, AVERAGING 37 X 100 FEET EACH, PRODUCED FRUIT AND VEGETABLES WORTH $23.45 EACH, AN AVERAGE OF $.45 A WEEK THROUGHOUT THE YEAR. THIS IS AT THE RATE OF $278.25 AN ACRE.



57 EVERY BACK YARD IN BOURNVILLE IS FULL OF FRUITS, VEGETABLES AND FLOWERS. THE BELT OF DWARF FRUIT TREES SHOWS IN THE MIDDLE OF THE PICTURE. TALL (OR STANDARD) FRUIT TREES ARE OUT OF DATE IN CITIES. *See page 139*

actually made in his house and lot. The city's income doubles every five years (it is now fifteen years old), and in fifty years, at this rate, it will have an annual income of about $5,000,000. And since it will never have to pay back Mr. Cadbury's gift of about $775,000, the city will have a large sum available for building other cities like Bournville.

The most important idea in all these garden cities is that represented by Letchworth, a suburb of London, which is thirty-four miles north of the metropolis, but reached by the best trains in less than an hour. For Letchworth has shown how we may build cities fully up to the Bournville standard without depending on magnificent gifts. When I saw Letchworth in 1908, the city was less than five years old, yet it had a population of 6,000 and there were twenty-one factories. It comprises 3,818 acres, of which 2,500, or 65 per cent., are perpetually reserved for an agricultural belt. Thus, the people of Letchworth will always be sure of a broad, restful country scene, even if London should build up solidly around the city. Moreover, they will derive a profit from this land, because it will be rented to market gardeners and dairymen. This unique feature is wholly in addition to the regular park system, for 200 acres, nearly one sixth of the town site, are devoted to public parks and playgrounds, including an eighteen-hole golf course.

Letchworth can never be crowded. The population is limited to 35,000, an average of nine persons to the acre for the whole tract, or twenty-three per acre for the town site. Twelve families to the acre is the maximum, and even in this case every family has a lot equal to 36.3 x 100 feet, which gives the poorest residents a fair-sized garden, and 45 per cent. better than the typical city lot of New York.

In other words, market gardening will easily produce anywhere from five to ten times as much as ordinary farming. This was well shown by a gardening contest at Bournville, in which nineteen gardens took part. These gardens, which averaged 3,700 square feet (the same as 37 x 100 feet.), produced vegetables and fruit worth $23.45 each, which is at the rate of $278.25 an acre. Yet the total yield from 77 of the acres where Bournville now stands was less than $25 an acre in the days of ordinary farming. So that these 77 acres for which a record has been kept not only house under ideal conditions a population of nearly 2,000 people, but they also produce more than six times as much profit under home gardening as they did under general farming.

It is this enormous productiveness which makes gardening such an efficient enemy of the saloon. For even the poorest tenant at Bournville has an experience like this: Coming from the slums of Birmingham and knowing nothing about gardening, he finds everything to encourage him. His beautiful evergreen lawn is already started. A hawthorn hedge has been planted around his whole lot for the protection of his garden. The gravel walks are all made. Dwarf fruit trees and grape vines have been planted, and on the house walls is a set of ornamental climbers which is a little different from that in any other yard. Thus all the preliminary work which is so costly and difficult that the beginner can never do it alone without serious mistakes and delays — all this is done for him. And the longest time which can elapse before a man has something to eat of his own raising is three months. After this event, it is all clear sailing. And experience shows that under such conditions a man finds gardening more interesting than the saloon.

The *saloon* and its attendant evils are unknown at Bournville.

None can be established without the written consent of every trustee, and the trustees are bound to suppress saloons altogether, unless such suppression leads to greater evils. They have the right to revoke licenses and to prescribe the hours of sale of intoxicating liquors, the quantities, and all other features of the business. Moreover, all the net profits must go to counter attractions.

I might have gotten hundreds of beautiful garden photographs at Letchworth or Port Sunlight, but I have chosen all my illustrations from Bournville because I believe its gardening system is, on the whole, the best. At Port Sunlight the front yards may be even more brilliant, because they are cared for by the town, but the back yards are not up to so high a standard, and, in my opinion, it is not best to take away from the individual the privilege of caring for his own front yard. At Bournville, the Village Trust lays out the flower beds in the front yard, but if the tenant does not like the plan he may change it. At Letchworth, plants are sold by regular nurserymen at regular rates, but Bournville gives its tenants a chance to buy plants, seeds, and bulbs at reduced rates.

I doubt if there is any place in the world where the gardens are uniformly as good as at Bournville. One great reason for this is that *gardening is compulsory*. There is a clause in every contract which says that every tenant must keep his place up to a certain standard of neatness and beauty. This is no hardship, for if a man is too sick or busy to dig his garden he can have this, or any other garden work, done for him cheaply. In the whole history of Bournville only two gardens have been neglected. No tenant will neglect his place when he knows that there are one hundred applicants for houses on the waiting list all the time.

Another reason for the enchanting beauty of Bournville is that the Village Trust has a gardening department. The head

gardener is a Kew-trained man, part of whose business is to help every one who comes for advice. Thus, no matter how poor a man may be, or how ignorant of gardening, when he comes to Bournville there is *no chance for him to get discouraged.* He knows that he can produce twenty dollars worth of vegetables and fruit if he is simply industrious. And all the preliminary work has been done for him. Of course the tenant pays for all that preliminary work in his rent, but it is distributed over a long period and the thing is a small item compared with the cost of house and lot. Then, too, he can get free booklets on gardening, describing the best shrubs and small trees for Bournville, and there is a free library of gardening books. And last, but not least, his neighbours on either side will help him in every emergency, for there is a splendid spirit of fraternalism in a community where every person is enthusiastic about gardening.

If you were a resident of Bournville, you would come home after your day's work and sit down to dinner in a room with beautiful French windows, that open directly on an exquisite bit of lawn, surrounded by flowers. Beyond this you would see fruits and vegetables in orderly array. And when you rose from the table you would feel an irresistible impulse to throw aside those French windows and step right into your garden. Before you realized it you would have done an hour's work there and the chances are that your family would have joined you in it. For Bournville's experience seems to show that gardening is the best of all family hobbies.

In short, the garden city idea appealed to me so strongly that I came home wishing that I could devote the rest of my life to it. My family spends twice as much as the ordinary family in Bournville and does not have half as much to show for it. And as soon as America gets a city like Bournville every visitor to it will be

discontented until he can live amid equal healthfulness and beauty. And thus, without waiting for socialism or any political revolution, the city life of the world may be radically changed within two or three centuries. Already cities on the Letchworth plan are springing up like magic in old England.

It is easy to be sceptical and to criticize, but I believe that every doubt and objection you can raise will be satisfactorily answered if you will send for that book of Ebenezer Howard's and write to Letchworth and Bournville. And I believe that you and I could start a stock company and establish one of these perfect cities within five years!

GARDENING LESSONS FROM BOURNVILLE

Having told the most important lessons of a general nature which England can teach us about garden cities, I now wish to record some technical gardening lessons which we can learn from such a beautiful place as Bournville.

1. Ordinary fruit trees are too big for a city lot. Even half dwarfs take up too much room. Dwarf bushes and pyramids are the best (see plate 57). In this way every one at Bournville has a dozen varieties of tree fruits on his place.

2. The finest street effects are made by using only one kind of tree on a street and spacing the trees at regular intervals (see plate 58). Thus, Acacia Road is planted with the rose acacia (*Robinia hispida*), a small tree with showy pink flowers which does not rob the gardens as elms would.

3. Streets may be made to look warm in winter and cool in summer by following the Bournville plan. In cold weather red brick and English ivy are comforting. In hot weather Bournville looks clean and cool, because every street is lined with trees and every yard is surrounded by a hawthorn hedge, so that the dominant effect is green.

4. More and better individuality in homes can be had by using a different set of climbers than by architectural ornamentation. This one idea will ultimately save millions of dollars (see plate 59). In Bournville English ivy is generally grown on north walls while the south and west are used for trained fruits and flowering climbers.

5. There is no danger of monotony in such streets, because every front yard has a different scheme of flower beds. The favourite bedding plants at Bournville are tufted pansies, pinks, and calceolarias, the last of which are not hardy in America. Every yard has either climbing or standard roses. We could use ramblers.

6. Every vacant lot could be made beautiful by giving poor people a chance to raise vegetables thereon. Every spare foot of ground in Bournville is put into allotment gardens, and when the front of such a lot is needed for houses the back part is in splendid condition for a garden.

7. In a garden city trees and shrubs can be kept from insect pests and diseases by public spraying. The hawthorn ermine moth threatened to destroy all the hedges in Bournville. Private contractors might use an arsenate on the foliage and children might be poisoned. Bournville will use a caustic spray in winter on the eggs and the cost of exterminating or controlling the insect may be only $700 or $800. The Village Trust will pay this and the people will never feel the expense.

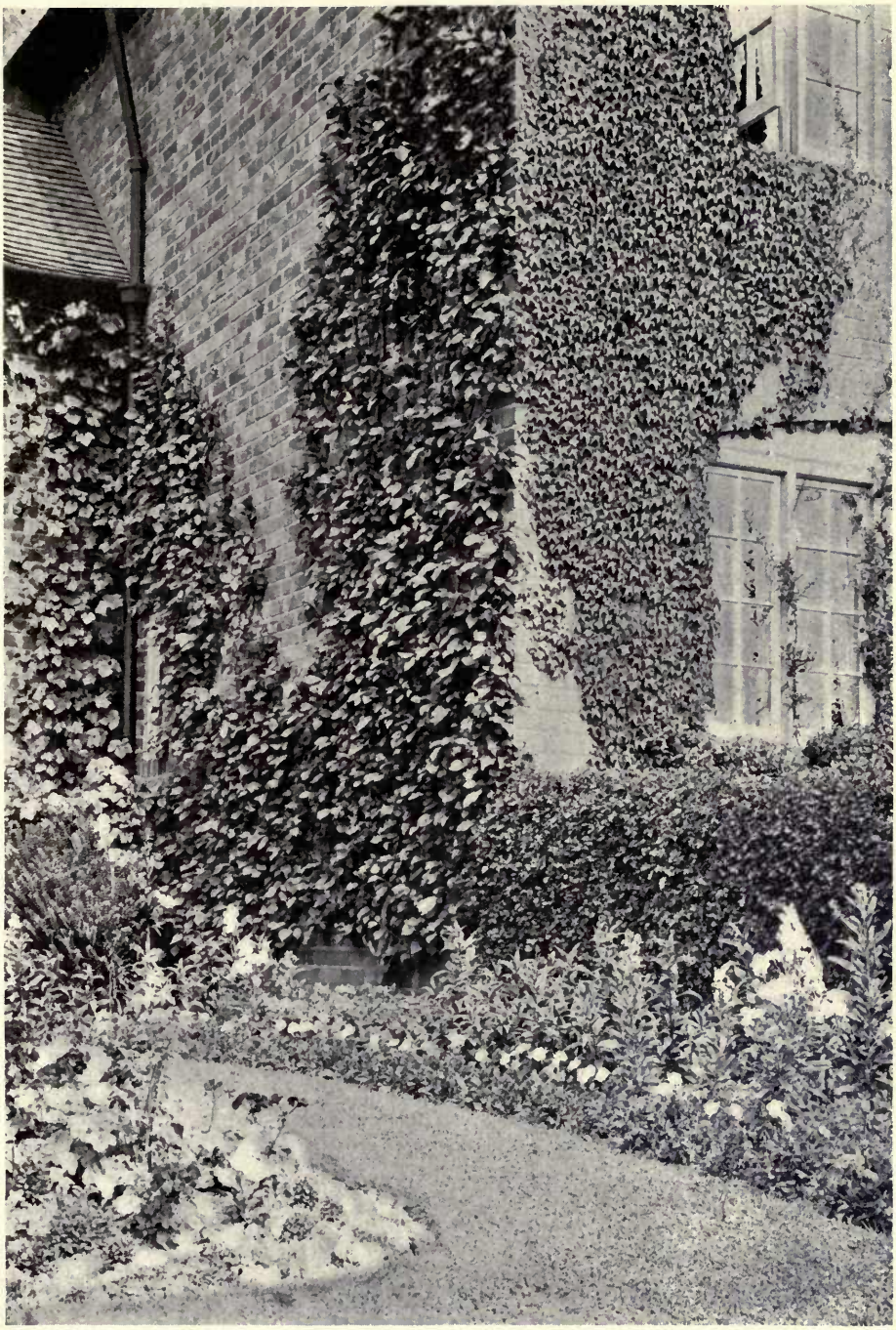
FRONT YARD GARDENS

This brings me to a very important question: "Are hedges best for a front yard, or fences? Or should the front yard be left open?"

The Bournville people are absolutely sure that the hawthorn

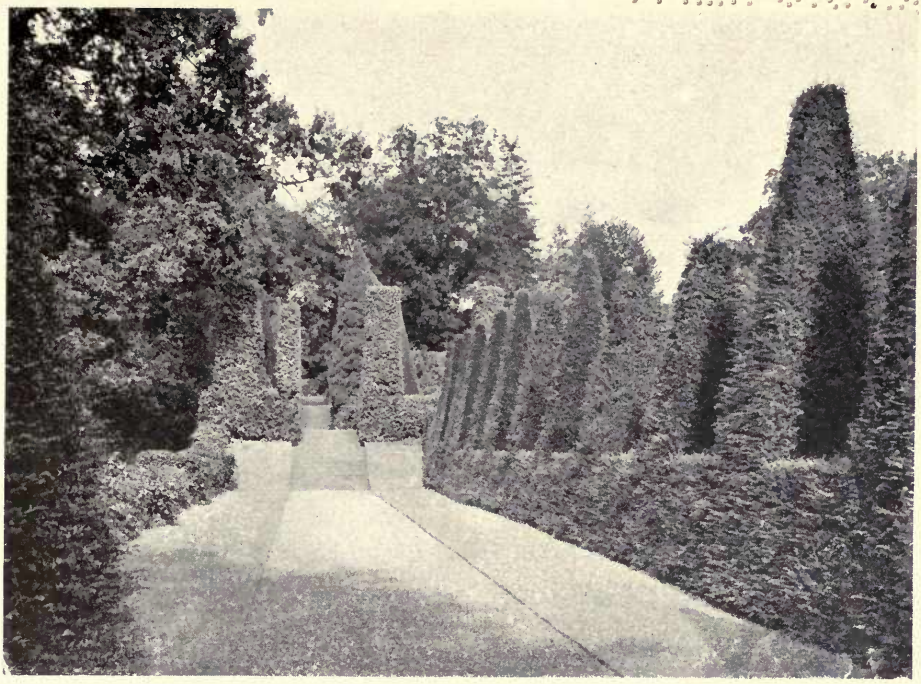
EVERY STREET HAS ONLY ONE KIND OF TREE AND EVERY YARD HAS A HAWTHORN HEDGE. THUS THE STREET EFFECT IS ONE OF SPLENDID UNITY WITHOUT MONOTONY IN ARCHITECTURE OR GARDENING. FOR WHITE HOUSES OCCASIONALLY RELIEVE THE RED AND NO TWO GARDENS HAVE THE SAME DESIGN. AN EARLY PHOTOGRAPH BEFORE THE TREES HAD ATTAINED SIZE AND BEAUTY. *See page 130*

UNIV. OF CALIFORNIA

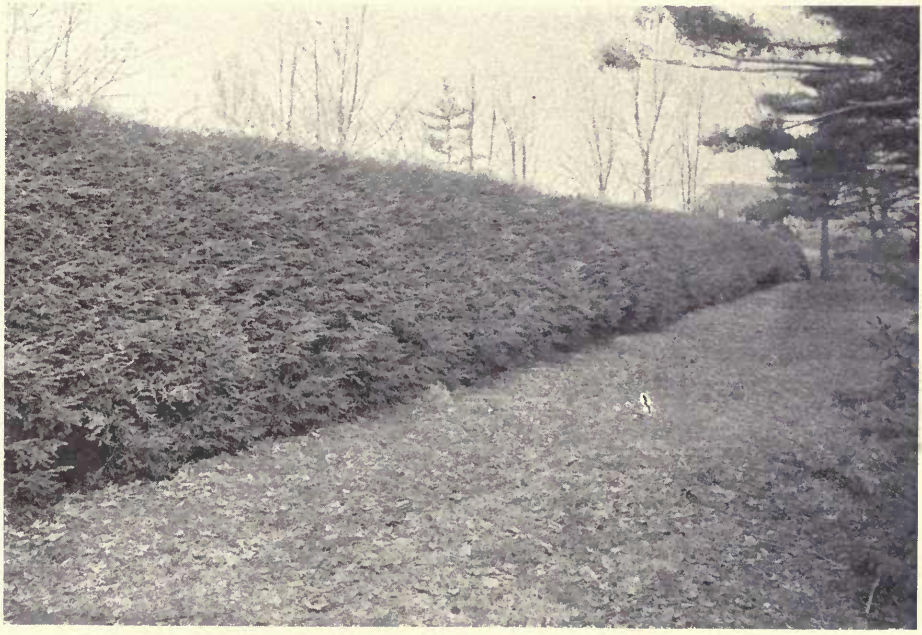


39 VINES GIVE MORE AND BETTER INDIVIDUALITY TO EACH HOME THAN ARCHITECTURAL ORNAMENTATION. BOURNVILLE SAVES THOUSANDS OF DOLLARS EVERY YEAR IN THIS WAY. *See page 140*

UNIV. OF CALIFORNIA



60 THIS PICTURE MIGHT HAVE BEEN MADE IN AMERICA, FOR THE HEDGE EFFECT IS PRACTICALLY THE SAME AS THAT PRODUCED BY HEMLOCK, IS IT NOT? YET THIS IS THE FAMOUS YEW. *See Page 148*



A SECTION OF HEMLOCK HEDGE IN AMERICA VIEWED CLOSELY TO SHOW THAT IT IS OUR EQUIVALENT FOR A HEDGE OF ENGLISH YEW. *See Page 148*

hedge is best for them. "We want flowers in our front yards," they say, "and you cannot have flowers if dogs, cats, and children are allowed to enter." Moreover the hawthorn hedges, all trimmed to a uniform height of about three feet, make the whole street look neat and attractive by contributing a uniform greenery. Also they act as a background to show off the flowers. It takes six years for a hawthorn hedge to attain a height of five feet, and it must be protected by "hurdles," or portable iron fences, for about three years.

In America this idea may win in the back yard, but not in the front. England is an aristocratic country and everybody has a passion for privacy. America is democratic and our present notion is to have no fences in front yards, and to leave the front lawns open so that the whole street will have a park-like effect. There are no shrubs in the front yards of Bournville; we use them a great deal.

Where we got this notion of parking front yards I do not know, but perhaps it was a reflex of the laws concerning cattle. In pioneer countries people are compelled to fence cattle *out;* later the owners have to fence their cattle *in*. When cattle ceased to roam the streets a great cry went forth, "Down with the fences," and it was well that they did, for they were an eye-sore, being usually of temporary materials and, full of meaningless ornamentation, no two alike. Then followed the lawn and shrubbery system for front yards, and whether it is more than a passing phase I do not know.

But of this I am confident. The feeling for privacy will grow slowly, but steadily, and our back yards will surely be made private. I believe we are not likely to have six-foot walls or hedges around the front yard. If we ever get a national hedge

plant for front yards I believe it will be Japanese barberry, which grows about four feet high. You can look over it and see your neighbour's garden, but his dogs, cats, and children cannot get into your garden.

On the whole I believe the best plan for small city lots, as a rule, is to have the open lawn flanked by shrubbery in the front yard, with the back yard wholly screened from the street and separated from the neighbours by a hedge, or wall six feet high.

PART II

ENGLISH EFFECTS AND AMERICAN MATERIALS

HOW WE WASTE MILLIONS ON MATERIAL WE SHOULD NEVER BUY AND ON EFFECTS WE CAN NEVER IMITATE — WHAT THE BEST ENGLISH EFFECTS ARE AND HOW WE CAN REPRODUCE THE SPIRIT OF THEM WITH LONG-LIVED MATERIAL — AND HOW WE CAN CONTRIBUTE SOMETHING TOWARD THAT SUPREME GOAL — AN AMERICAN STYLE OF GARDENING

CHAPTER XIV

ENGLISH EFFECTS WITH HARDY CONIFERS

What equivalents can we have for yews a thousand years old, cedars of Lebanon planted by Crusaders, and "Big" trees that grow a hundred feet in sixty years?

EVEN the most casual visitor to England notices three conifers, or evergreen trees, for every returned tourist chatters enthusiastically about "yews a thousand years old, cedars of Lebanon planted by returned Crusaders, and 'big trees' from California that grow a hundred feet in sixty years." Verily, it is not surprising that we spend many thousands of dollars a year in vainly trying to reproduce such wonderful effects.

But all this money is wasted because we fail to realize that the climate of the Northern and Eastern quarter of the United States (where a good many of us live) is antagonistic to that of England. Our summer is hot and dry, theirs cool and moist; our winter is characterized by zero spells, theirs is mild and open. Socially we are related to Europe, but climatically to Japan and China. If beginners knew this we could save a million dollars a year which we now spend on European trees and shrubs that die the first winter or soon thereafter. For long-lived material we must look to our own native trees. For "spice" we must look to China and Japan. All else is merely temporary.

My errand in England was to study the materials of gardening

from a new point of view. I was to find out what were the half-dozen most important trees, shrubs, vines, etc., in England and their long-lived equivalents for America. For example, everywhere in England you see the *redwood* — a native of California. Our equivalent for it is *hemlock*, for both trees have a feathery effect produced by flat sprays. Such a statement is calculated to give a botanist a sick headache, because the fruits of these trees are utterly different. But we do not cultivate conifers for their fruits. Plain tree lovers are primarily interested in the texture of the foliage. We know a pine by its brush, a spruce by its stiff needles, an arborvitæ by its fan, and so on.

In other words, it was *the landscape value of garden materials* I went to study. I wanted to see with my own eyes which trees were grave and which were gay; why people gush about box, yew, and rhododendrons, and whether we cannot grow a tree that looks just like the cedar of Lebanon — except to a botanist. It was human interest I was after — the kind of thing that never gets into the botanies. I wanted to see how to make America as beautiful as England, and how to stop wasting a million dollars a year.

OUR EQUIVALENT FOR YEW

The yew is the most important ornamental conifer for England, chiefly because it is the longest-lived of all trees the English have. "The Fotheringal yew," says Miss Rogers, "proved by the rings on its stump that it had lived nearly three thousand years." It also has the following strong points: (1) It holds its lower branches better than any conifer I know, even when considerably crowded and shaded. (2) It stands clipping well and therefore makes a better hedge in Europe than any other conifer. (3) It is just the right height for a decorative tree, since anything over thirty feet

high is out of proportion in a garden or on a lawn. (4) Its trunk symbolizes the relation between the mother country and her colonies and also between the classes in England, for it seems to say, "Socially we divide, politically we are one; in peace we scatter, in time of need we act together."

But yew has one great drawback. It is poisonous, and therefore cannot be planted where cattle may nibble the foliage, for to eat a spray of it is to die. Consequently, yew is not conspicuous in the landscape, but it is in every one's home grounds; it hedges gardens; it makes stately avenues, as at Hampton Court; it lines walks of beautiful solemnity approaching many an exquisite church; and in the graveyard it is the ever-present symbol of immortality.

Unfortunately yew is a failure in America north of New York. It exists only in places protected in winter from strong wind and sunshine. Our native yew is what people call "ground hemlock" (*Taxus Canadensis*), a trailing bush which can be trained as a hedge but hardly as a tree. The real equivalent of the yew, as a lawn tree, is the Japanese yew (*Taxus cuspidata*), because it forms a low, round-headed tree. It has the same red berries, showy in autumn. (Luckily yew berries are not poisonous*.) Moreover, the bark of the Japanese yew is redder and warmer than that of the English yew. The tree is not harmed by zero weather, drying winds, or sudden bursts of sunshine when the ground is frozen, and is hardy even in New England. Possibly it will become our national hedge plant, since it grows faster than trailing yew and holds its lower branches better than hemlock.

But even if Japanese yew should live for thousands of years

*Elwes and Henry in their great work, "The Trees of Great Britain and Ireland," state that the seeds and foliage of Japanese yew will probably prove poisonous.

in America it can never stir such emotions as the yew does in England for it is not native and it will always be a menace to life. If England had dozens of native conifers, as we have, the yew would be a mere incident. But England has practically only two native conifers — the yew and the Scotch pine. No wonder these two have become almost a part of the English character!

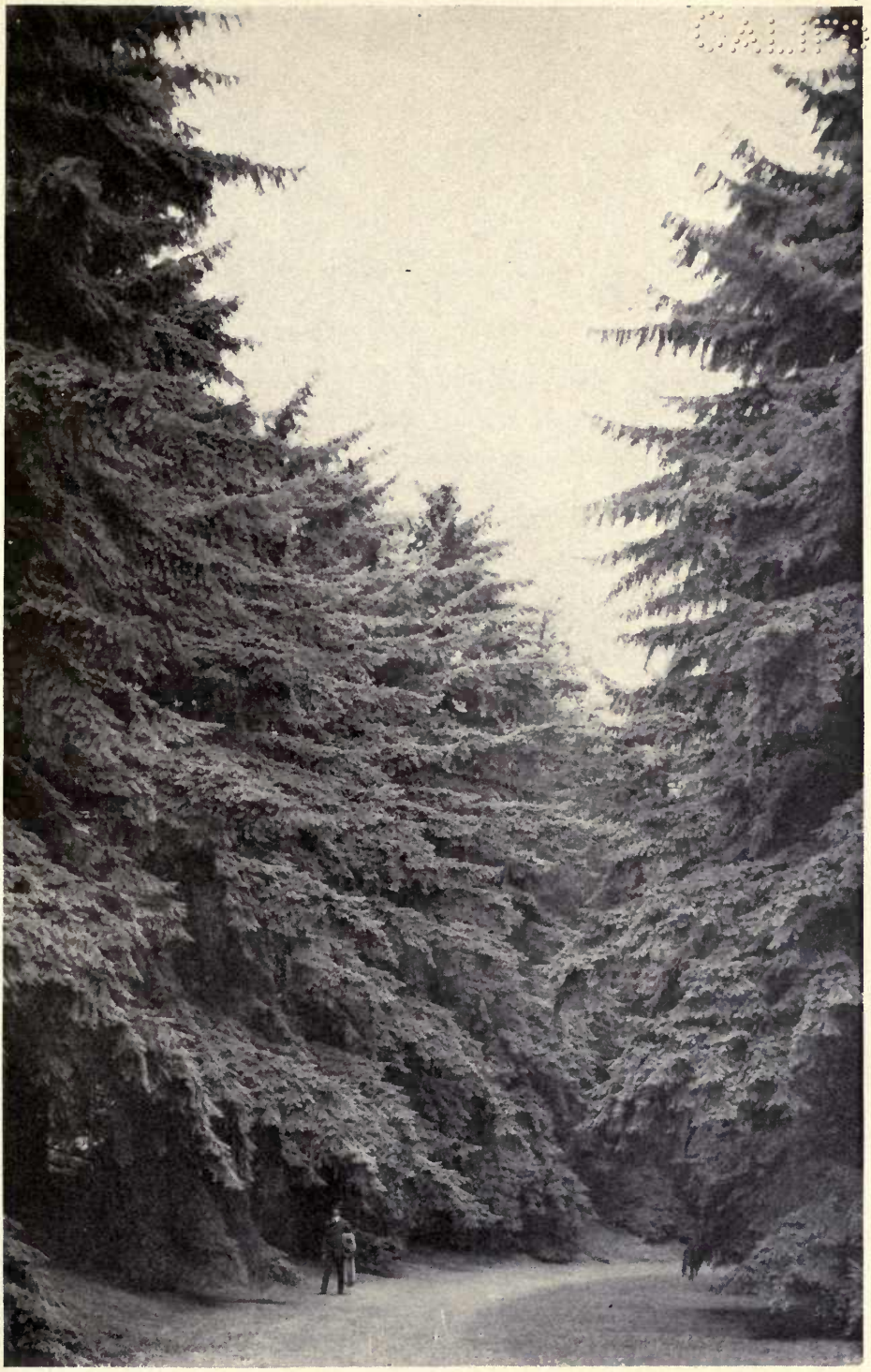
I am almost glad that English yew is a failure in America, because no country ought to copy any other; each should make the most of its own character. In the *hemlock* we have a tree with practically the same foliage-effect, which has strong American traits (see plate 60). The peculiar grace of both trees is produced by short, soft needles arranged in two ranks, but presenting the effect of a flat spray. Hemlock is not so enormously long-lived, it grows too tall for gardens, we must use more care to preserve its lower branches, especially in hedges, and its trunk is less interesting than that of yew. On the other hand, hemlock has a more delicate spray (owing to the shorter needles), and is not poisonous, so that we can plant it everywhere and by the million. Hemlock and white pine ought always to be the most prominent evergreens in the North and East, for the former is the best embodiment of the idea of *grace* among available conifers, while the latter best expresses the idea of *strength*.

OUR EQUIVALENT FOR THE CEDAR OF LEBANON

As the yew is the most decorative conifer in England, so the cedar of Lebanon is the most picturesque (see plates, 61, 63). You see it everywhere, centuries old, the pride of every country gentleman's estate. In Asia Minor specimens have lived two thousand years. The peculiar glory of this cedar is the perfection of its strata. It is a very open tree, and its successive tiers or

61 AN AVENUE OF CEDARS ABOUT A QUARTER OF A MILE LONG, ABOUT EIGHTY YEARS OLD, AND SEVENTY FEET HIGH. SUPPOSED BY SOME TO BE THE GLAUCOUS AFRICAN CEDAR, WHICH HAS THE SAME EFFECT AS THE CEDAR OF LEBANON, WHEN OLD, AND IS HARDY AS FAR NORTH AS NEW YORK. MR. H. J. ELWES BELIEVES THESE TREES ARE CEDARS OF LEBANON. DROPMORE, BUCKS. J. B. FORTESCUE, ESQ. *See page 142*

CAMBRIDGE



62 SEE HOW SMALL THE MAN IS IN COMPARISON WITH THESE DOUGLAS SPRUCES WHICH HAVE GROWN 100 FEET IN SIXTY YEARS IN ENGLAND! THE CALIFORNIA FORM OF THE DOUGLAS SPRUCE IS NOT HARDY IN THE EAST. BUT THE COLORADO IS. NEVER BUY A DOUGLAS SPRUCE WITHOUT ASKING WHICH FORM YOUR NURSERYMAN HAS. MURTHLY CASTLE, PERTH, W. S. FOTHERINGHAM, ESQ. *See page 151*

platforms of foliage are spread out for every one to enjoy. It also has very interesting cones. We have absolutely nothing like it growing wild in America.

Of all the foreign conifers the cedar of Lebanon is the most conspicuous in England, but it is also the most thoroughly at home. Technically, this is not true, because it does not "self-sow," but humanly speaking it fits the landscape to perfection. It never has the stern or tragic look of our picturesque conifers, eloquent of a thousand battles lost and won. The mellowness of old England has descended upon it like a benediction.

But never has a grander personality made a poorer start in life. A young cedar of Lebanon grows very slowly and has little beauty. At the time when other conifers are symmetrical and graceful it is a rough, tousled mass of harsh foliage having the texture of the larch. But in old age and at a distance the foliage-effect becomes wonderfully soft and the whole tree assumes a prophetic appearance, so that one is transported as if by magic to Old Testament times.

Unfortunately the cedar of Lebanon is generally a failure in America, especially north of New York. But Professor Sargent is doing a splendid work in sending explorers for the hardiest forms of the most important trees, and the Arnold Arboretum has a stock of *Cedrus Libani* raised from seeds found in the northernmost mountains of the Taurus range and at the highest altitude where this cedar grows.

But even if Professor Sargent's form of the cedar of Lebanon should prove disappointing there is another cedar which is certainly hardier than the common stock and in old age it cannot be distinguished from the cedar of Lebanon. This is the Mount

Atlas cedar (*Cedrus Atlantica*), which Mr. William Robinson believes is only a geographical variation of the cedar of Lebanon and not a distinct species. In the young state, the African cedar has an upright leader, while that of the Lebanon cedar is nodding. The leaves of the former are generally less than an inch long and thicker than broad, while those of the latter are an inch or more long and broader than thick. But their landscape effects are identical (see plate 61).

At the home of Major Rogers, Sevenoaks, Kent, I saw a cedar of Lebanon practically one hundred feet high which was planted in 1815. At Enfield I paced under one about two hundred and fifty years old which had a spread of over one hundred feet.

"No finer things than the cedars can be within the view of the flower garden," says William Robinson, "but they should never be planted near the house, or their great branches will darken it and in small flower gardens they are sure to be in the way."

OUR EQUIVALENTS FOR THEIR SPRUCES

Another conifer that will grow a hundred feet in a century is the Douglas spruce. Indeed, I saw one at Dropmore, one hundred and seventeen feet high, with a spread of one hundred feet, which came from the first lot of seeds brought to England in the winter of 1827–28. This is the only hundred-foot conifer I have ever seen that has retained its symmetry. It is a perfect pyramid, the lower branches being all present and resting on the ground. And Mr. Elwes says, "It is a baby to some I know."

The Douglas spruce (see plate 62) illustrates a most important principle. The trees of western Continental coasts are, broadly speaking, interchangeable and so are the trees of eastern

Continental coasts, but *you cannot expect Western trees to live long in an Eastern country or Eastern in a Western.* For example, England can grow the Douglas spruce and other gigantic conifers of the Pacific coast to perfection, and California can grow most of the European trees. Thus the Pacific coast, though socially related to us, is climatically akin to Europe.

Again, *the Californian form of the Douglas spruce is not hardy in the East, but its Colorado form is.* We could wish that all the California conifers had been able to cross the Great Divide, so that the East might hope to have hardy forms of all these titanic trees. One should never buy Douglas spruces without inquiring whether they came from the California or Colorado stock.

Botanically, the Douglas spruce belongs to a different genus (*Pseudotsuga*), but for landscape purposes it is a spruce. It is the best spruce England can have, both for ornament and for timber. It will grow sixty feet in forty years in England, and occasionally three feet a year.

The spruce on which America has wasted the most money (doubtless more than a million dollars in the past) is the Norway (*Picea excelsa*). This is the blackest and gloomiest of conifers and the chief source of the notion (where it exists) that evergreens are monotonous and depressing. One of our worst American traits is that we buy the things that are cheapest at first instead of cheapest in the end. The Norway spruce is the lowest priced conifer because it is the fastest grower and like nearly all other fast growers it is short-lived. It makes a splendid appearance in the nursery, but soon gets shabby. The best dark-coloured spruce that is always radiantly happy in our climate is the Oriental (*Picea orientalis*).

Our best native spruces are the white and Colorado (*P. alba* and *pungens*). England cannot grow a good white spruce, but she grows good Colorado spruces and has an important lesson to teach us about them. With us the Colorado spruce is the most popular of all evergreens, because it has the bluest and therefore the most conspicuous and unnatural colour. Every yard has one, along with other curiosities, and we scatter them all over the place in an effort to make our grounds as different as possible from their environment. On the contrary, we ought to plant chiefly the trees of our neighbourhood, and America will never look happy and mellow until we do. Moreover, we ought never to isolate a Colorado spruce or any other conspicuous object, but use such things to "spice" a composition. Precisely what I mean is shown by the frontispiece.

OUR EQUIVALENTS FOR THE "BIG TREES"

How the soul of a Californian must rejoice when he sees a *Sequoia gigantea* that has grown a hundred feet in fifty years! I saw one at Dropmore that was ninety-eight feet high and planted about 1860. The oldest specimens I have seen in the East are at Rochester and Dosoris, and they are "homelier than sin." To tell the truth, the big tree is not beautiful in our gardens. (See plate 63.)

The only equivalent of it we can have is *Cryptomeria Japonica*, the most important timber tree of Japan. Both have a bunchy foliage effect which is produced by long strings, like those of the cypress or club moss. But even the Cryptomeria is hardy only as far north as New York, unless in sheltered positions, and this type of conifer is only for collections. We do not want it in our landscape.

OUR EQUIVALENT FOR REDWOOD

The big tree cannot hold a candle to the redwood (*Sequoia sempervirens*) save in height. The tallest big tree I have heard of is three hundred and fifty feet high; the tallest redwood three hundred and twenty-five. In England the redwood will grow a hundred feet in sixty years. I dare say I had read a hundred descriptions of the redwood before I went to England, in a vain attempt to get a mental picture of it. Yet the essence of its beauty is ridiculously easy to tell. *Its foliage effect is simply that of our common hemlock.* Add to this a beautiful warm red bark and you have the whole story of its landscape value.

Of course, these points are nothing compared with the enormous height of the redwood. I don't mean to say that any words of mine can convey the feelings one has at the first sight of a hundred-foot conifer, but the redwood is only one of many conifers that reach a hundred feet. The distinctive beauty of the redwood is the feathery grace of its foliage and this is produced in precisely the same way as that of the hemlock, *viz.*, by short, soft needles in two ranks. Hemlock is inferior in height and beauty of bark, but if we plant enough hemlocks we can make the East beautiful enough without sighing for sequoias. England can grow our Western hemlock to perfection but not our Eastern, so far as I have observed, for the latter tree makes several trunks instead of maintaining a single leader as it does here.

THEIR BEST FIR AND OURS

England has no native fir (what is called "Scotch fir" is a pine), but the common fir of Europe, which one sees everywhere, is the silver fir (*Abies Picea* or *pectinata*). *This is the one we waste our money on.* But we have a much better tree in the white fir of Colorado (*Abies concolor*). It is the cheeriest fir because of the

soft silvery tone of its foliage, and it is the most graceful because it has the longest and softest needles. Most firs are stiff; this is not.

But England has us badly beaten on *hundred-foot firs*. She can grow to perfection the colossal firs that attain two hundred and three hundred feet on the Pacific Coast — the Cascade Mountains, Puget Sound, Columbia, and California red firs (*Abies amabilis, grandis, nobilis, magnifica*). These we can never hope to grow. But I saw them only as specimens in collections; they do not affect the English landscape. Whether we can ever grow hundred-foot conifers on Eastern estates time alone can tell. Our only chance, apparently, among firs is with the Colorado white and the Crimean (*Abies concolor* and *Nordmanniana*). If we fail we can console ourselves with the reflection that they are out of proportion, anyhow, on a small estate.

THEIR BEST PINE AND OURS

The only pine native to England is the "Scotch" (*Pinus sylvestris*) and it is no wonder that we *waste thousands of dollars on it*, for in its own country it is very lovely. It is a picturesque pine, but mildly so, as befits a mildly picturesque country. Its chief asset is its warm red bark. And since it is everywhere planted for timber it conspires with the brick cottages, tile roofs, and rosy cheeks of the people to make England seem the warmest and merriest place on earth. Fortunately, the tree is open enough to display the red bark to advantage. The metallic blue cast of the foliage is the third element of its beauty.

In America, the Scotch pine grows quickly but deteriorates or dies after twenty or thirty years. Our nearest approach to it is the red pine (*Pinus resinosa*) which agrees with the Scotch in having an open, roundish head when old, two leaves in a bundle,

and, most important of all, red bark. But the red pine, is a better tree and it is strongly American. Its leaves are twice as long (four to six inches), it grows even higher than the white pine, and it is long-lived. The red pine is sometimes called the Norway pine — after Norway in Maine, not Norway in Europe.

The *red pine is also superior to the Austrian*, which is the gloomiest tree in England. But for wind-breaks we need a pine with dense bunches of long, coarse needles. Therefore the Austrian is much planted in America for shelter belts, especially along the sea-shore, but it dies out after twenty or thirty years. As a lawn tree it is too coarse and dull and it is always shaggy with dead ones, whereas the Scotch pine has the neat habit of dropping its cones as soon as ripe. Whenever we want a wind-break we should plant red pine in preference to the Austrian; it will last longer and it makes cheerful groves because the trunks are red and the foliage, though dark, is lusty and brilliant.

I am glad the Scotch and Austrian pines are short-lived here, for we do not want our most conspicuous conifer to be like that of any other country. *The white pine is our tree.* Let us plant that everywhere and try to live up to it. The white pine (*Pinus Strobus*) is one of the most graceful pines in the world, because of its long, soft brushes, and it is certainly the cheeriest conifer we can have in the North because there is so much white in its foliage. I did not see a white pine in England worth the powder to blow it up. Some one told me there isn't a healthy white pine in England, but this a mistake.

When it comes to *hundred-foot pines* the East must own itself beaten by California and England. White and red pine have been known to attain one hundred and twenty feet in the East, but hardly in cultivation, and what is that compared with three hundred

feet? — for that stupefying height is attained in California by the sugar and Western yellow pines (*Pinus Lambertiana* and *ponderosa*). England has at least one hundred-foot specimen of the latter.

GROTESQUE CONIFERS

An Alice-in-Wonderland tree that spoils many a fine park picture in England is the monkey puzzle (*Araucaria imbricata*). In its native country, Chile, this tree doubtless fits and attains age and dignity, but in cold countries it is preposterous — a mere curio.

It has a wretched mimic in the Spanish fir (*Abies Pinsapo*) which is the stiffest and hardest conifer that I know, alternately dismal and ridiculous. It is literally a horrid tree, in the ancient sense of the word.

The loveliest species of the genus Araucaria is *A. excelsa*, a marvel of symmetry, which promises to become an elegant feature of Florida homes south of Miami.

To sum up: England grows taller conifers than we, but we possess a greater variety of evergreens, North, South, and West. No one section of America, probably, can grow as great a variety as England can. *Our job is to try Japanese conifers on a small scale and plant our native conifers by the million.**

* Veitch's "Manual of the Coniferæ" is a standard work on evergreens, but is chiefly botanical. Elwes and Henry's "Trees of Great Britain" is the leading English work. Sargent's "Silva of North America" is the American standard and his "Manual" is a popular abridgment. We have many popular books on native trees, mostly descriptive, but Dame and Brooks's "Handbook of the Trees of New England" contains estimates of their horticultural value by W. H. Manning. A good all-round book is "The Tree Book" by Julia E. Rogers. Felt's "Insects Affecting Park and Woodland Trees" is Memoir 8 of the N. Y. State Museum. The Bradley Bibliography now being published by the Arnold Arboretum is the most complete list of books, pamphlets, and articles on trees from every point of view. There is much to learn about the best evergreens for different soils and climates and for all the different uses.

A DEODAR (*Cedrus Deodara*) SHOWING THE HARSH, LARCH-LIKE TEXTURE OF YOUNG CEDARS

"WELLINGTONIA" IS THE ENGLISH NAME FOR THE "BIG TREE." THIS ONE WAS PLANTED BY THE DUCHESS OF WELLINGTON, APRIL 24, 1853. NOTICE THE BUNCHY FOLIAGE EFFECT

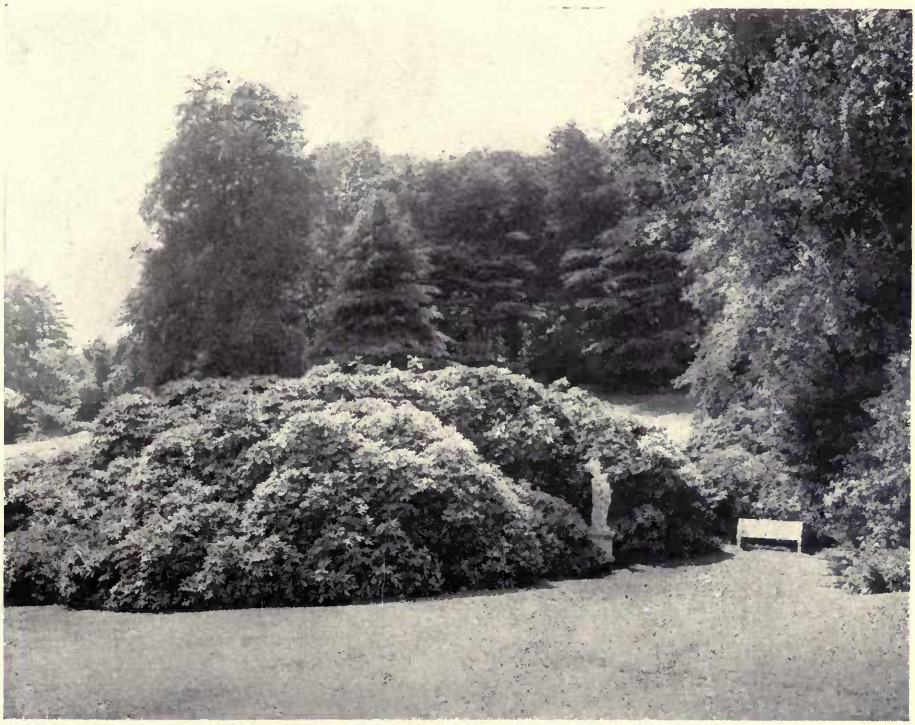
See page 152

CEDARS OF LEBANON AT WHITTON TOWER, NORTHUMBERLAND. PROFESSOR SARGENT SECURED IN 1902 A FORM OF THIS CEDAR WHICH IS HARDY IN NEW ENGLAND

See page 148

UNIV. OF
CALIFORNIA

"THE MOST GORGEOUS FLOWERING EFFECT IN THE WORLD IS THAT OF RHODODENDRONS." THEY HAVE HUGE TRUSSES. MANY COLOURS, AND HAVE MAGNIFICENT FOLIAGE THE YEAR ROUND. A MASS EFFECT AT KEW. *See page 166*



THE "CLASSICAL EFFECT" OF BROAD-LEAVED EVERGREENS, SHOWING THAT THE SECRET OF "GARDEN MAGIC" DOES NOT RESIDE IN MERE LEAF FORMS (SUCH AS LAUREL, MYRTLE, OLIVE) BUT IN LUXURIANCE. RIVERHILL, SEVENOAKS, KENT

See pages 159, 160

ENGLISH EFFECTS WITH BROAD-LEAVED EVERGREENS

CHAPTER XV

ENGLISH EFFECTS WITH BROAD-LEAVED EVERGREENS

We may get only three fourths of the English luxuriance, but we have more native species — Seven effects we can have and four we can't

IT IS no wonder that the myriads of Americans who visit England every year become intoxicated with the beauty of the broad-leaved evergreens. The first glimpse of the rhododendrons in Rotten Row is enough to turn any one's head, and the Americans who crowd into the big tent at the inner circle, Regent's Park, to view that matchless colour show in June, can hardly wait to get back home and begin planting. For, in England, any one can see that broad-leaved evergreens are *the most sumptuous plants in cultivation.* True, pines and other narrow-leaved evergreens are also attractive the year round, and many of them attain far grander dimensions, but they do not have gorgeous flowers or red berries that last all winter. Moreover, conifers as a class are a little inclined to coldness and monotony, while the broad-leaved evergreens, from the greater breadth and lustre of their leaves, are pleasanter to live with the year round. *For the immediate environment of a house, broad-leaved evergreens are certainly the most desirable plants in the world,* while tall conifers are quite unsuited to that position.

But the most precious quality in broad-leaved evergreens is a certain *mystic charm* which has nothing at all to do with showy

flowers or berries. It resides in the foliage. Every one feels it, but I have never seen any attempt to express or explain it, or even a name for it. I venture to call it the "classic" effect, because the first glimpse of a Greek temple in England framed by luxuriant masses of rhododendron, box, and holly overwhelms one with feelings that seem to well up from the depths of the soul. They are deeper than the instinct that England is "our old home." One might almost call them memories of a previous existence. There is a sudden consciousness that we, too, once lived in Italy — that Greece also is our old home (see plate 64).

I know I spoil this by talking about it, because words are such frightful liars, but I feel assured that the secret of all "garden magic" is simply the power which old plants and old gardens have of stimulating the imagination, or, as I like to say, these old *memories*.* Every one knows a few precious moments in life when a sense of the brotherhood of man floods the consciousness. So every one who sees in England this combination of classic architecture and broad-leaved evergreens is momentarily transported in spirit to Italy and Greece, or, at least, feel some dim sense of kinship with the mighty past.

Yet the plants I spoke of are *not Italian symbols*. Rhododendron, box, and holly may flourish in the Mediterranean region, but they are *surcharged with British feelings*. The master-words to the Italian are laurel, myrtle, and olive. And right here rises our great hope. For if England can transport those who behold her gardens, though she lacks the older symbols, so America may perform this miracle, though she may use *American symbols*. And these symbols, if I am any prophet, will be American rhododendrons, holly, and mountain laurel.

* Oliver Wendell Holmes, in "Elsie Venner", says: "They walked over the crackling leaves in the garden, between the lines of box, breathing its fragrance of eternity; for this is one of the odours which carry us out of time into the abysses of the unbeginning past — if we ever lived on another ball of stone than this, it must be that there was box growing on it." See also Alice Morse Earle's chapter on box edgings in her "Old Time Gardens."

THE TYPICAL "SPRING GARDEN" IN ENGLAND — A COLLECTION OF RHODODENDRONS, WHICH IS OFTEN COMBINED WITH AZALEAS. MANY VARIETIES, ALL COLOURS, A WINDING WALK, DIFFERENT LEVELS — NEW PICTURES AT EVERY STEP. KEW. *See page 167*

But the best things nearly always cost the most. Not only are the plants themselves very expensive, but the preparation of the beds is also a serious matter, while the arrangement of the plants (so as to prevent colour discords, etc.) is so beset with pitfalls that a landscape designer is really needed for any work involving an expense of one hundred dollars or more. Also the plants are slow growers. The only consolations are that when they once get settled they last a lifetime, and the cost of maintenance is small, the chief items being the annual mulch and picking off the young seed pods. But gardening is not the cheapest game in the world and the first cost of broad-leaved evergreens is so appalling to a beginner that most Americans steer their bark against Scylla or Charydbis, *i. e.*, they skimp on cultivation or buy cheap "Dutch stuff."

MANY FAIL ON THE CULTURE

The cultivation of broad-leaved evergreens is a mighty particular business. Like golf it is easy to understand, but not such a snap to play. Three fourths of the story, as Henry Hicks says, is the six-inch permanent mulch, which retains the soil moisture, while the other fourth is protection from winter winds and sunshine, which "burn" the foliage. But in practice there are more troubles than I can mention here. (For instance, it is best to plant rhododendrons on the north and west sides of a house so that they will get the right amount of shade, but those sides usually get the worst winter winds. Again, rhododendrons won't grow in limestone soil, but there are limestone valleys a hundred miles long in this country and it is just like us to want rhododendrons anyhow. It is easy enough to learn the ideal conditions for broad-leaved evergreens, but somehow none of us ever seem to have them. So a man can't play the rhododen-

dron game well unless he does a good deal of reading and visiting gardens.

MORE GET FOOLED IN BUYING

But the greatest sink-hole for our money is the "Dutch game." The cheapest evergreens you can buy are those freshly imported from Holland and as they always look the best, they are irresistible to a beginner. Every one has to lose at this game before he will heed the warnings of thousands who have had the same experience.

The reason why the Dutch plants cost the least is that they can be grown faster in Holland than anywhere else. There is an inexhaustible supply of water only eighteen inches below the surface of the soil in many of these nurseries and consequently the growth is really forced.

The reason why the Dutch plants always look best to a beginner is that their leaves are darker and shinier, because of this abnormally fast growth.

The reason why they die soonest is that plants which have been grown abnormally fast are set back when removed to average conditions. They suffer especially from drought and winter killing.

Moreover the Dutch soil is most treacherous in another way. We have nothing in the East that will amalgamate with it. That black waxy earth looks moist when it is really dry, and if evergreens once get thoroughly dried out at the root it's "good-by" to them.

If you wish to back your judgment against the world's, buy freshly imported Dutch evergreens. But I should not be surprised if America has paid as much as $20,000,000 in the past for Dutch evergreens that died a lingering death in five years after planting.

The only safe plan is to buy English stock that has been grown under normal conditions or else "acclimated stock," *i. e.*, stock which has been freed from the Dutch soil and grown a year

or more in America, obviously, the only time economy is to pay a fair price for something that has a chance to grow.

There are half a dozen buying plants worth considering. The first big fact to notice is that every foot of height adds about 300 per cent. to the cost! Therefore, the simplest plan is to buy only the smallest sizes. But nobody wants to do this, because it means the longest wait.

The most sensible plan is to buy just as few large plants as are necessary. A good way to cut down one's list is to omit all the specimen plants you intended to put on the lawn and all the plants you had thought of putting in a border of mixed shrubbery, because these effects are inferior. Concentrate on special beds for broad-leaved evergreens on two sides of the house. The cheapest large plants are those with few stems and no foliage at the base. These you can put in the back row where their deficiencies will be hidden. But the grandest effects come from naturalizing broad-leaved evergreens on a great scale in woods or groves. If you can afford such effects, it may be well to split your order, buying the *species* from one man and the *hybrids* from another. The species are the cheapest and hardiest and therefore the best for wild gardening. The hybrids cost the most, because they have larger flowers and more and better colours; and also because they have to be grafted or propagated by a costlier process. Consequently, it is economy to use these only in the most important situations, near the house.

HOW TO BUY HYBRIDS

The ideal way to buy hybrid rhododendrons is to get only plants that have been propagated by layering. These are the costliest of all, because it is the slowest process, but such plants are,

as a rule, the hardiest and longest-lived, and there is no possibility of their being choked to death by the miserable stock on which all cheap rhododendrons are grafted.

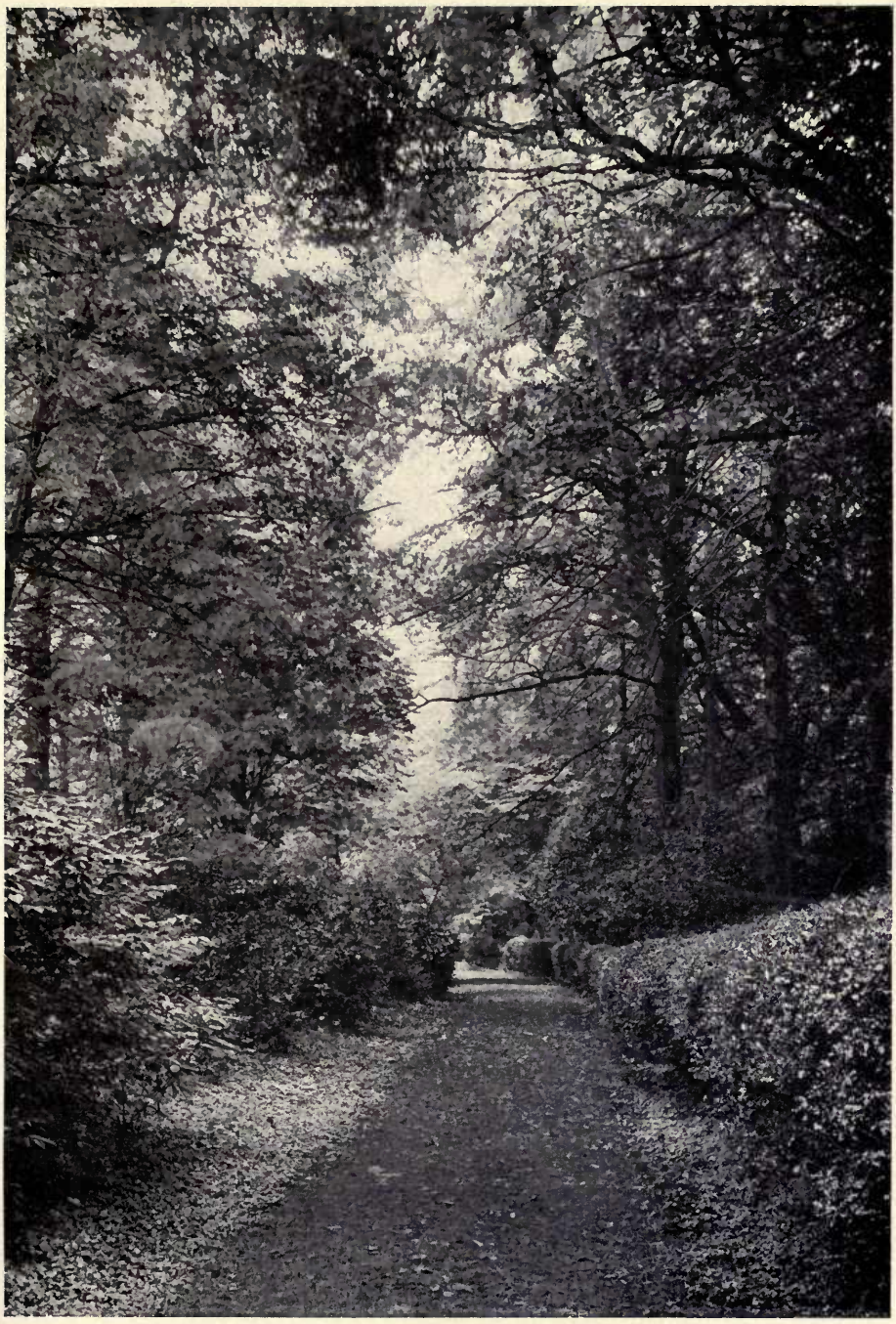
The "cheap" nurserymen have everything their own way because they have two flashy arguments. First, they magnify the fact that some varieties are worthless on their own roots. The answer is that those varieties are no longer offered for sale on their own roots.

Second, they say that grafted plants grow faster than layered plants. True enough for the first few years, but after that the death-rate is much higher. Any kind of grafted plant has a structural weakness, for the heart wood never unites — only the cambium layer. Consequently it is more liable to be blown over. The worst feature is the suckering and killing.

But it is hard to get rhododendrons on their own roots and if you cannot afford them the next best plan is to buy plants that are grafted low — not high. The higher a plant is grafted, the sooner it reaches a salable height and therefore the greater the profit. But if you will pay a little more, get low-grafted plants and set them a little deeper than they were in the nursery, you give the variety a chance to make roots of its own and eventually free itself from the danger of being killed by suckers.

HOW TO BUY THE SPECIES

For great mass effects the best rhododendrons are the two American species — Catawbiense and maximum. The best way to buy these is in car-load lots. Nursery-grown plants cost more than plants collected from the wild. There are a lot of irresponsible fellows who offer cut rates on car-load lots, but their stuff is poor. It is cheaper in the end to buy from an advertising nurseryman who has made this work a specialty and has a national



A "LANDSCAPE FORESTRY" EFFECT WE CAN HAVE. EVERYWHERE UNDER THESE DECIDUOUS TREES ARE BROAD-LEAVED EVERGREENS, SUCH AS HOLLY AND RHODODENDRONS. WE CAN CARPET THE GROUND WITH EVERGREEN TRAILERS. DENBIES, DORKING, SURREY. *See page 168*

reputation to maintain. For one hundred dollars you can get a car load of *Rhododendron maximum* of all grades and sizes from two to eight feet and there will be from forty to two hundred plants in it. The freight to New England from Pennsylvania collecting grounds is twenty-two to forty dollars a car.

But there! Why prate about mere dollars when there are inspiring effects we can study!

HOW ENGLAND EXCELS US

How book notions change when one sees the real things! I was brought up to believe that England has the best climate in the world for evergreens, and consequently it is folly to try to rival her. The first part may be true, but the second is not. We can probably never attain more than 90 per cent. of English luxuriance, but we have a greater variety of native species. For example, we can never expect to speak of rhododendrons in our woods as "weeds," or game coverts of English laurel as "evergreen rubbish," as William Robinson justly does in criticizing certain English excesses. On the other hand, do you know what the English call broad-leaved evergreens? They often call the peat-loving members of the group "*American* plants," for they have in mind chiefly mountain laurel and the two rhododendrons which grow wild in our Northern States.

Of the forty-nine kinds we can grow in the North, twenty-two grow wild in this very region, and ten more are native to an allied climate (that of Japan), while only eight are native to Europe.

HOW WE CAN EXCEL ENGLAND

The only place where we can reproduce practically all the English effects with English material is Oregon, for that is about

the only place that combines a cool, moist summer with a mild winter. However, nine tenths of the evergreens that flourish in England will thrive on the Pacific coast if given enough water during the dry season.

The South can equal the English luxuriance, at least near salt water; but with a different set of plants which will show a family resemblance, yet individual distinction.

The Northwest can have no broad-leaved evergreens worth mentioning, and the Middle West cannot rival the East.

The East spends the most on broad-leaved evergreens, and is popularly supposed to have the worst climate for them. So I shall concentrate on that region. Yet even here, I believe, we can reproduce seven of the most important English effects with broad-leaved evergreens, while there are only four that we can never hope to have. This may seem like a formidable list, but all these effects fall roughly into three groups — flowering, fruiting, and foliage, and they may prove interesting if examined in that order.

THE SPRING-GARDEN EFFECT

Undoubtedly the most gorgeous flowering effect in the world is that of rhododendrons. (See plate 64.) True, roses and azaleas have a wider range of colours, while lilacs and hydrangeas have bigger trusses, but they do not have a magnificent background of evergreen foliage. The English spring strikes high C in June when the rhododendrons bloom, while our dramatic moment is in May, when the leaves come out and the fruit trees blossom. We already have some spring gardens more gorgeous than any I saw in England, but they are of a very different kind, as explained in the chapter on shrubs.

The *English type of spring garden is a collection of rhododendrons*

and azaleas, and I believe we can reproduce it with joyous results. The example we should follow is illustrated by the Rhododendron Dell at Kew (see plates 64 and 65), and the gardens of the Royal Horticultural Society, or by the Vale of Cashmere in Prospect Park, Brooklyn, N. Y. The first principle is to get a little ravine or valley, so that we may enjoy the rhododendrons *both from above and below.* Then let there be a path following the natural contours, so that every one may see the whole show without retracing steps or being plagued by a maze. By this method there will be *a new picture every two or three steps.* Next observe that all the shrubs which bloom before the leaves look best against an *evergreen background;* therefore put your azaleas chiefly in front and rhododendrons chiefly in the back. Finally, arrange the "magenta crowd" by themselves, and *nine tenths of the colour discords will be avoided.* By "magenta crowd" I mean all the colours derivable from purple, *e. g.*, lavender, crimson-pink, mauve, light and dark purple, and crimson. These colours give exquisite effects in a bed by themselves. The other colours will usually take care of themselves. A collection of one hundred varieties arranged on such a plan would be a joy unspeakable.

Instead of such collections we seem to prefer mass effects. But too often we dump down car loads in a flat place near the entrance to an estate, wipe out all other vegetation, and jam the rhododendrons together in such a way that visitors think only of the cost. We ought rather to aim at great landscape pictures like the one at Deepdene, and any one may reproduce the spirit of that famous spectacle provided he owns a valley about a quarter of a mile long, with its banks crowned by tall trees.

But most Americans who plant rhododendrons on a great scale simply scatter them in their woods. A better idea is represented

by the new art called "landscape forestry," which transforms monotonous woods into enchanting groves at small expense and in only four or five years. (See plate 66.) Some of the main ideas are saving the best trees and giving them a chance to develop, making trails or paths to all the most interesting features, and breaking here and there the fringe of shrubbery which generally surrounds American woods, barring all visions of the beauties within. Only by some such plan can we have the grandest wild garden effects with rhododendrons, and we ought to produce even more ravishing pictures than those of England, because our Catawbiense and maximum are so much better than the vile-coloured Ponticum that becomes a "weed" in English woodlands.

THE PEAT-GARDEN EFFECT

The great limitation of the spring garden, however, is that it omits the mountain laurel, which has the most exquisite flower of all broad-leaved evergreens, and our other great hero, *Rhododendron maximum.* So the next step is to have *a bed of evergreens that will show flowers or berries the year round.* For example, one can have a mass of bloom from mountain laurel in late June, *Rhododendron maximum* in July, heather in August, holly-leaved osmanthus in autumn, and the red berries of American holly all winter.

Moreover, there are a lot of exquisite little plants for edging and carpeting these beds which are well-nigh impossible to grow elsewhere, such as the ever blooming Daphne, the far-famed Shortia the bronze-leaved Galax, trailing arbutus, wintergreen, partridge-berry and that never-ending marvel, the mountain andromeda, which holds up all winter sprays of white flower buds somewhat like the lily-of-the-valley.

Such combinations are doubly appropriate because most of these evergreens belong to the heath family, and most of them want the same cultural conditions, *viz.*, a permanent mulch and protection from winter winds and sunshine.

Is it any wonder that hundreds of English estates should lavish space and money on developing such an idea? It is a pity that there is no good name for this type of gardening. The English call such a garden an "American garden," but we can hardly use that name. I have ventured to call it the "peat garden," because everybody used to think that these shallow-rooting evergreens were peat-lovers. Now we know that they are merely lime-haters and we can even grow them in a limestone country by digging out three feet of soil. Moreover we need not even use peat, for leaf mould will do. There are now special booklets and catalogues devoted to this type of garden, and the idea is well worth your investigation, for we can grow many of these American plants better than England can.

THE HEATHER EFFECT

Whether it is possible for us to grow heather by the acre here or not I do not know. There is a big patch of it at the park in Halifax. It is a wonderful plant for waste places, covering miles of cold-bog in Scotland, yet covering dry, gravelly slopes, as I saw at Cliveden. It makes a gorgeous show in August, but its colour is harsh and there is usually no shade to soften its garishness. Moss pink will clothe an American hillside with equally violent colour at less expense, though not, of course, in summer.

The main reason why heather is so precious in the old country is that every foot of ground worth cultivating is made the most of and therefore the wildness which the heart craves is some-

times far to seek. England has no real wildness — only symbols like broom and gorse and heather. We still have a little primeval forest.

I should not like to see miles of heather in America, because heather belongs to British character and not to us. Field mice will probably keep us from using it on a big scale, for they nest in it and gnaw the branches.

But a collection of heather is a very sweet and precious thing. This involves only a few beds. Here you may grow specimens from friends in Europe or localities you have visited. The common and Scotch heathers you can have in half a dozen colours. Then there is the alpine heath that marks the dawn of spring, the bell heather or cross-leaved heath which has bright green foliage all winter, the Cornish heath which blooms in October and has a sweet scent, the Irish heath which blooms from July till frost, Dabœc's heath which has drooping racemes, and so on.

The heath collection at the Arnold Arboretum is an eye-opener. It looks as if the books were mistaken in advising partial shade for heaths in winter, for they thrive in full sunshine at the Arboretum. Professor Sargent thinks that we have neglected one of the most important materials of landscape gardening and and that we could create great and splendid colour pictures with the hardy heaths.

THE CLIMBING EFFECTS

The most precious evergreen climber in the world is the ivy, because it has been loved longest by the human race. Therefore we ought to grow it wherever we can, but only on stone and brick buildings. The English sometimes make the mistake of sending ivy up tall trees. Why hide a characteristic beauty, like the trunk of a beech? Even when a tree is about to die this is a bad practice,

for the close-climbing ivy and ampelopsis outline and emphasize death, while the loose Virginia creeper transmutes and glorifies it. Ivy will climb to the top of a tall castle in England, but in the latitude of New York it attains only ten feet or so.

The best evergreen climber for the North is the climbing euonymus (especially the round-leaved form, variety vegetus), and we ought to plant it by the million. Eventually its leaf may be as dear to us as ivy is to Europe. For the euonymus is hardier than English ivy and has the immense advantage of red berries that glow all winter. It is a Japanese plant which I predict will become thoroughly Americanized.

THE CARPETING EFFECT

There are four ways of carpeting the ground in England with evergreen creepers that thrive under trees and shrubs. The classical effect is that of ivy, which we can reproduce even in New England, where ivy cannot be grown as a climber.

The second best effect is that of trailing myrtle (*Vinca minor*), which has blue, five-lobed, waxy flowers, a specimen of which can be picked almost any day in the year. Do not associate this with cemeteries. It is used by the thousand on great estates in New England, is quicker-growing than ivy, and better adapted to our climate.

Third, the London Pride (*Saxifraga umbrosa*) makes charming rosettes and will grow in cold, wet clay in dark, narrow passages between London houses. It may be unsuited to our climate, but I hope many of my readers will try it on a small scale in various situations, and I hereby ask some wealthy American to try to carpet a forest floor with it, as the English do.

Fourth, the Aaron's beard or the rose of Sharon often covers

banks ten feet high and a hundred yards long. It makes a great sight in summer when thousands of its big yellow flowers are open. The name of this plant is *Hypericum calycinum*. In England it flourishes in full sunlight, but this is too much to expect from any broad-leaved evergreens in America, save yucca and a few things of minor importance. The Pacific coast ought to try this plant.

We can excel England on *evergreen creepers with red berries that are attractive all winter*, except, of course, when covered with snow. The best for woods are our native wintergreen (*Gaultheria procumbens*) and partridge-berry (*Mitchella repens*). An Englishman will sometimes spend a hundred dollars to carpet a little patch of woods with these lovely plants which grow by the million in America on land worth five dollars or ten dollars an acre.

For the sea-side the best red-berried evergreen creeper is the bearberry (*Arctostaphylos Uva-ursi*), which thrives in full sun on sand or rock.

The climbing euonymus also has red berries, but as a creeper it is not so valuable, because it humps up every little while, in an abortive effort to climb.

There is an exquisite white-fruited creeper that is buried in catalogues under the name of *Pachysandra terminalis*, as an offset to which I propose "Japanese mountain spurge." It has highly characteristic leaves, dainty little spikes of whitish flowers, and quaint clusters of fat, waxy berries, which are attractive in summer.

THE FOLIAGE EFFECT

Of all the broad-leaved evergreens that are cultivated for *foliage alone*, box is undoubtedly the most important for Northern countries. True, holly has a deeper religious significance, and when it is grown by the mile for hedges little or no fruit is expected.

A HARDY EVERGREEN BAMBOO, TALLER THAN A MAN, AT GRAVETYE, THE HOME OF WILLIAM ROBINSON, WHO ORIGINATED THE "WILD GARDEN" IDEA. OUR EQUIVALENT FOR THIS IS ARUNDINARIA JAPONICA. *See pages 174, 328*

THE WRONG WAY TO ARRANGE RHODODENDRONS, I. E., JAMMING THEM IN FLAT, SOLID MASSES. WILD GARDEN EFFECTS ARE PREFERABLE. THE "PEAT GARDEN" IS ALSO A BETTER IDEA. *See page 167*

But holly is identified with the pleasure grounds, while box is the most characteristic plant of the garden proper. Indeed, the only plant which lives for a century or more in old gardens is box. That is why the sight and smell of box stir old family memories more than any other plant in cultivation. I do not see how any garden can have charm without it. In formal gardens, at least, we should always use some dwarf box for edging flower beds, and in every garden there should be some tree box to symbolize the beauty of a green old age, and also to serve as a connecting link between the generations.

The losses which Americans suffer from box are often very heavy and peculiarly distressing. I confess that I have occasionally joined in the cry for a hardy equivalent of box. The popular substitute for box is *Ilex crenata*, of which there are three forms of varying merit. One of them is said to be even glossier than box in winter, as well as hardier and possibly of quicker growth. This "Japanese box" mimics the box leaf fairly well, and perhaps it will exhibit in age that "embossed" effect which, as Henry Hicks observes, is a crowning beauty in old boxwood. But I am sure it lacks the pungent odour of box, which is so potent in restoring precious memories. However, some people dislike the odour of box.

The solution of the difficulty may be *Buxus Japonica*, which is hardy at the Arnold Arboretum. Dallimore says it is lighter green than other boxes, has rounder leaves and rather loose habit. The Arboretum specimen, however, is dense and dark enough, except that after a long drought it becomes pallid.

How to prevent losses with box is a long story. Every one who wishes to dwell with the best that the past has to give us, and to profit by the experience of Americans who have spent thousands

of dollars in moving century-old box to new gardens, should read the articles on box that are referred to at the end of this chapter.

Ivy is, of course, the most precious climber or creeper grown solely for foliage effect. It is common enough to see trained pyramids of it in formal gardens, but I believe we shall never achieve "garden magic" in that way, or by growing bay trees in tubs. The bay tree is the laurel of the ancient poets (*Laurus nobilis*) yet the sight of it does not thrill our hearts. Only free, luxuriant growth, I believe, has sufficient power of suggestion.

Unexpected aid may come from the "hardy evergreen bamboo," for we should not think of all bamboos as "tropical." Bamboos are merely tall grasses, and they fit our woods to perfection. Of the seven kinds that are hardy in the North, most belong to the slender type of beauty, but there is one which has as much body as a rhododendron. It may not be evergreen north of Philadelphia, where I once saw a superb specimen that was eight feet high. Nurserymen call it *Bambusa Metake*, but its correct name is *Arundinaria Japonica*. As both names are formidable, I once proposed that we call it the "broad-leaved bamboo," for the leaf attains two by twelve inches. "Hardy evergreen bamboo" is, however, quite as designative, and reveals its greatest value.

The effect of this evergreen bamboo is somewhat like that pictured on plate 67 and on plate 107. To realize the glory of such a mass, you must know that it is considerably taller than a man. Then make the leaves dark and lustrous, like a rhododendron, and you will get some notion of the luxurious abandon with which everything grows at Gravetye, the home of William Robinson, prophet

of wild gardening. This particular species Mr. Robinson calls *Bambusa palmata*, and says it is even finer than the other hardy, evergreen bamboo. The reedy effect is noticeable here. The only picture I have of *Arundinaria Japonica* shows it arching gracefully to the ground.

THE CITY EFFECT

New York can never be as beautiful as London because she has no front yards. I saw thousands upon thousands of London yards full of matchless beauty. For they are hedged in by broad-leaved evergreens, especially holly and aucuba. Such gardens contain nothing else save grass, but to my mind they are infinitely more dignified and appropriate than any flower beds that mind can conceive. May heaven save London from skyscrapers, and may American cities of decent size be saved from tall tenements! Possibly we may grow broad-leaved evergreens in back yards of big cities, but probably we never shall, for there can be no privacy in yards overlooked by tall buildings. In London there are countless brick buildings of two or three stories with lovely gardens front and back. In front yards public opinion compels decency and demands beauty.

I do not wish to see front yards in America hedged in, but there is a noble effect we can get by massing. Every one who has noticed the rhododendrons in the Vanderbilt yard facing the principal entrance to Central Park, in New York, will know at once what is meant. For rhododendrons, box, holly, and the like make the grandest harmonies with architecture of any plants in the world. This is because they have just enough formality, are evergreen, long-lived, never grow too high, and are attractive every day of the year. *Conifers cannot stand smoke* and are a total failure in London, but Henry Hicks declares that *broad-leaved*

evergreens are good smoke-resisters. However, I should never plant them without providing a scheme for washing them every day, if necessary, since evergreens are not beautiful when dusty.

THE WINTER EFFECT

America ought to be redeemed from its present bleakness and ugliness in winter. The chief elements in that reform will be the shrubs with vivid berries and branches (such as the Japanese barberry and the red-twigged dogwood), because they give the cheapest and quickest results. But these bushes, being leafless, show brightest against an evergreen background. This is all the more reason for broad-leaved evergreens at the base of every dwelling house where they will grow. For winter in the North is five twelfths of the year, or rather the trees are leafless as long as that.

We must not run too much to rhododendrons, for in zero weather their leaves hang down, curl in, and look most unhappy. Mountain laurel is one of the cheeriest in winter. We can get superb bronzes from *Azalea amœna*, arching wands from Leucothoe, amazing lustiness from *Berberis Japonica*, a perfect carpet of running myrtle where grass will not grow, and above all, the never-fading glories of American holly.

FOUR EFFECTS WE CAN'T HAVE

We can never hope for any tree effects among broad-leaved evergreens in the North. In England the holm oak, or ilex of Italian gardens (*Quercus Ilex*), will sometimes attain fifty feet. On the other hand, England can never rival *Magnolia grandiflora* of the South or the Christmas berry of California. We shall never equal English hedge effects. It is possible to have miles of holly hedging in the North, but practically it is only a rich man's plant.

68 THE ENGLISH LANDSCAPE POSSESSES MORE LUXURIANCE AND MELLOWNESS THAN OURS AND THIS IS LARGELY DUE TO THE TREE GROWTH, SINCE TREES GROW TALLER AND LIVE LONGER THAN OTHER PLANTS. *See page 181*

AN ENGLISH PARK, SHOWING WHY THE TREES ARE ALL FLAT-BOTTOMED — THE DEER TRIM THEM. AN AVENUE OF HORSE CHESTNUTS ABOUT A MILE LONG AT BUSHEY PARK. *See page 186*

69 THE ENGLISH LOVE THE OAK BEST OF ALL TREES BECAUSE IT LIVES LONGEST. SOME DAY OAKS WILL BE FIRST IN OUR HEARTS ALSO. WE HAVE MANY KINDS, ENGLAND ONLY TWO. *See page 191*

AN AMERICAN CATALPA IN ENGLAND, SHOWING THE BREADTH AND NOBILITY WE COULD GET BY PLANTING OUR OWN TREES AND GIVING THEM PLENTY OF ROOM TO GROW
See page 187

We can never have the variegated effects of gold or silver-edged hollies which are said to be highly cheerful in the English winter.

We shall never have the game-cover effects of England - thousands of acres of English laurel and *Gaultheria Shallon*. We are a long way yet from being a nation of pheasant raisers.

But why repine? Think of the effects we *can* have! Are they not more numerous and beautiful than you ever suspected?*

* Holly, Yew and Box" by W. Dallimore, pictures and describes many varieties. The best American information on this subject is contained in back numbers of two magazines. These can be had separately, or one may consult the bound volumes. (G. M. means *Garden Magazine:* C. L. means *Country Life in America*. The numbers refer to volume and page.)

"The Broad-leaved Evergreen," (G. M. 2:18). The best brief all-round article.

"The Hardy Broad-leaved Evergreens" (C. L. 13:605), describes the best sixteen kinds, and gives a key to the forty-nine that are hardy.

"Moving Century-old Box" (C. L. 10:537), gives practical details.

"Moving Old Box to New Gardens" (C. L. 7:56), gives principles of hardiness and cultivation.

"The Best Hardy Plants of the Heath Family" (G. M. 3:334), describes materials of the "peat garden."

"All the Hollies Worth Growing" (G. M. 4:234).

"The Gorgeous Family of Rhododendrons" (C. L. 9:429), gives a list of all the hardy varieties.

"Rhododendrons, Wild and Cultivated" (C. L. 11:467), inspiring and practical.

"A Perfect Combination — Rhododendrons and Lilies" (C. L. 12:531), describes all the peat-demanding lilies.

"Planting for Winter Comfort and Beauty" (C. L. 9:155).

"The Show Garden of the South" (C. L. 13:299), describes lovely effects with Indian azaleas and camellias.

"How to Buy Trees and Shrubs Economically" (C. L. 12:48). Tells how beginners are deceived when buying evergreens.

ENGLISH EFFECTS WITH HARDY TREES

CHAPTER XVI

ENGLISH EFFECTS WITH HARDY TREES

The two false gods we worship, Speed and Show — Our mania for abnormally quick and gaudy trees must give way to an enthusiasm for Permanence and Fitness.

I DO not blame the hundred thousand Americans who annually visit England, for desiring to duplicate the best English tree effects. For the English landscape possesses more luxuriance and mellowness than ours, and this is largely due to the tree growth, since trees grow taller and live longer than other plants. (See plate 68.) Also I am sorry when cultured people plant English trees and they die. But I believe we are wholly mistaken in throwing the blame for such failures on our *methods*, when the real defect is in our *spirit*. The trouble is *we worship two false gods — Speed and Show.*

For instance, we Americans have an insane passion for shade by the speediest and cheapest route. The only method we can conceive is to plant "fast growers." Yet there are two better methods, one of which is actually quicker, while the other is cheaper in the end. It is legitimate to alternate silver maples or box elders with long-lived trees, but even this is usually a bad plan, for some one will lack the sense or courage to chop down the temporary trees before they injure the permanent ones. And every time we plant fast-growing trees only, as most of us do, we are sure to reap disappointment, for they are bound to die or become unsightly at an early age.

Again, we may be quite unconscious that we worship Show, but we do. For we go about our friends' country places admiring their golden elders, weeping hemlocks, cut-leaved maples, and other "horticultural varieties." These things do not exist in nature but are, in a sense, creations of the nurserymen. They are like jewellery or spice or slang—to be used in moderation, but we ordinarily make them the dominant features of our home grounds. I trust that the readers of this book are not immoderately fond of loud clothes, cheap jewellery, rag-time or slang, but the trees Americans plant most are analogous to these things. We can never achieve the mellowness of the English landscape by such a route. For, even at their best, horticultural varieties are transitory and undignified compared with their prototypes. They make for restlessness, not repose.

If I could deliver to the American people a golden treasure-box containing the most precious thought that England has to give her sister about her trees, that thought might be expressed somewhat as follows: "The most valuable quality in any landscape is *mellowness*, and this can be attained only when long-lived trees are in the majority. Two thousand years of change have made our English people enthusiastic lovers of enduring things. A thousand years from now you Americans will have the same spirit, and America will be quite as mellow as England. For half the trees one can then see in any direction will be a century or more old. And they will not be the trees you now plant by the million, such as poplars, willows, soft maples, and others. They will be oaks, beeches, lindens, and the like, for slow-growing trees are the only ones that can achieve great age and stature. Your job, as individuals, is to recognize this law of evolution and put your home grounds in harmony with it."

How can we do this? In two ways. First, by transplanting all the large trees we can afford. Second, by planting enough slow-growing native trees to dominate the land we own. The fast growers and horticultural forms should be reduced to a minimum. The former are only for temporary luxuriance; the latter only for spice. This is the only true perspective.

What a different programme this is from the one we have hitherto been following! Until a few years ago, it was the regular thing for nurseries to have only the English oak, elm, beech, and linden; there was no demand for the American equivalents. Now the whole attitude is changing. We see that *we can never get English mellowness merely by planting English species.* We have abundant proof that European trees, as a rule, are not long-lived in America, except on the Pacific coast. But, even if they did thrive here, it would be slavish imitation to have them in preponderance. We want an American landscape, not an English one. Formerly we aimed at the letter and missed the spirit. Now we see that mellowness resides not in English trees as such, but in the great age and stature of tree growth, and that *we can have mellow country places only by preserving and planting our own long-lived trees.*

But my theme is how to reproduce all the most important English effects with material that will really be hardy and long-lived in America. In my judgment there are about eight main effects.

THE PRIVATE FORESTRY EFFECT

Everywhere in England you see *private forests planted for profit.* England first won her naval supremacy in ships built of English oak trees which were practically planted for the purpose on private estates. Public or state forestry hardly exists in England. Here we commonly think that forestry concerns the government only.

A few Americans will plant catalpa, locust, or some other tree crop that matures in seven to fifteen years, but when the passion for enduring things becomes a national trait with us we will plant oaks and other species that require a hundred years or more to mature. Meanwhile, the Bureau of Forestry at Washington, D. C., has a plan for coöperating with any one who has a forest in which profit is the chief consideration.

THE LANDSCAPE FORESTRY EFFECT

By "landscape forestry" I mean the *art of managing woods for pleasure*. There are thousands upon thousands of private deer parks and game preserves in England, while here they are comparatively rare. One can always tell a park by the abundance of grass and the peculiar shape of the trees. Most of these are nicely rounded, and all have a flat base at a uniform height above the ground — the height to which deer and cattle can reach. It would be childish in us to imitate this effect. If one keeps cattle for breeding purposes the effect will come naturally and will be appropriate. But if one wants a park for beauty it is much better to have the branches of specimen trees come right down to the ground.

In *sporting woods*, the characteristic effect is a dense undergrowth of English laurel (*Prunus Laurocerasus*), a broad-leaved evergreen shrub of great beauty which is not hardy here. We can never duplicate this effect, but even if our rhododendrons are narrower, darker, and duller of leaf, the fact is of small consequence. When America is as crowded as England we shall doubtless pay much attention to breeding cattle and making game preserves but it would be the shallowest sort of affectation for us to imitate now her cattle-pruned trees or laurel coverts.

The *private arboretum* is occasionally seen in England. Its object is to cultivate every kind of hardy tree. Some examples

that I saw were too haphazard, some too botanical. We have a good many wrong kinds in America. The best pattern for us is the Arnold Arboretum. Mr. Thomas Proctor has a very good private arboretum at Topsfield, Mass.

The commonest point of view toward *pleasure woods* in America is to "let them alone." That is why our woods are so uninteresting. American woods are full of diseased, crooked, and spindly trees, and there is no comfort in walking among them because of mosquitoes, brambles, and burrs. The slowest and most imperfect way to restore a piece of woods to its primeval grandeur is to let it alone. We can make it wilder and more interesting at once by planting great quantities of wild flowers that will spread out of their own accord. I saw acres of bluebells in English woods, and this effect we can reproduce literally. The cheapest method of carpeting the forest floor with wild flowers I have explained in Chapter VI. At present I can speak only of wild gardening in which trees are dominant and flowers incidental.

The loveliest effect of this kind which I saw in England was that of *beech woods*. The beeches themselves are a constant revelation of beauty. All have exquisite, smooth bark, and retain much of their foliage all winter. Some are beautiful, others grotesque; some are high branched, others low branched; some are developed on all sides, others only on one; some are spotted with gray lichens; others uniformly coated with green. The finest moss in the world grows under beech trees. Holly grows to perfection under beech, and makes an ideal companion for it, but there is an atmosphere in beech woods that is positively not of this world, and therein lies its mystic charm. Tennyson reproduces it in "Pelleas and Ettare."

But I realize that private forestry is only for people with

good-sized country places. These fortunate persons should buy "Forbes's English Estate Forestry."

Most of us can have only a few trees on the lawn or in the garden. Therefore all the other effects described in this chapter are viewed from this stand point. Conifers and street trees must be omitted. Conifers, since they are described in Chapter XIV and street trees because the point of view is generally public, not private. For street trees let the student consult *The Garden Magazine*, Vol. VI, page 128 and Vol. VIII, pages 118-121.

THE FLOWERING EFFECT

The grandest flowering tree I saw in England is the horse chestnut. There is an avenue of horse chestnuts about a mile long at Bushey Park, and I fancy the trees are eighty feet high. (See plate 68.) When "Chestnut Sunday" approaches, the London papers tell their readers, and great crowds flock to see the spectacle. We can grow the horse chestnut quite as well as England, but we commonly use it for shade or street planting, for both of which purposes it is ill adapted. Street robberies are easily committed under its too dense shade, and the ground beneath horse chestnuts is often clammy.

There are only a few flowering trees that grow to great size, and since large trees are not wanted in a flower garden, these are fittest for a large lawn. Next to the horse chestnut the best *tall flowering trees* are tulip tree, false acacia, empress tree, and Japanese varnish tree, all of which I believe, we ought to grow better than the English can.

The *most popular* flowering trees are the *small ones*, since the flowers can be seen and picked easily. Many people who have not been to England suppose that the commonest flowering tree there is the hawthorn with double red flowers, and consequently

our yards are full of it. This is an unfortunate mistake, for the common English hawthorn is white and single. All the red and double hawthorns have come from a wholly different species (*Cratægus monogyna*), although hundreds of nursery catalogues still indicate that they were derived from *Cratægus Oxyacantha*—an immortal error. You do not see double red hawthorns everywhere in England because double flowers and unnatural colours are not considered suitable for lawns. The principle has been well stated by our great American landscape designer, Mr. Warren H. Manning: *Horticultural forms originated in the garden; they should be restricted to it, and not allowed to dominate the landscape.* The showy thing we do is to put pink dogwood and Bechtel's flowering crab on the lawn. The refined thing is to plant white dogwood on the lawn or pink dogwood in the garden.

I did not see any flowering effects with trees that struck me as particularly English. I believe that we can get the equivalent of their hawthorn with our native species, but not with the European. *Our strong card, however, is our native dogwood.* We can grow magnolias quite as well, and our western catalpa (see plate 69) is suitable for lawns, but until the day of public spraying comes we should go slow on everything of the rose tribe, because these plants are subject to San José scale. I refer to Prunus and Pyrus, which include the flowering cherries, plums, peaches, apples, pears, and quinces.*

THE COLOURED FOLIAGE EFFECT

Fortunately flowering trees are showy, as a rule, only when in bloom. Otherwise they would get stale, like a bed of Baby Rambler rose or any other "ever-blooming" bore. But purple

* For important articles on flowering trees see The *Garden Magazine*, Vol. VI., p. 128 and Vol. VIII., pp. 330-332.

leaves are vociferously purple for months at a time, and that is why we love them. Trees with abnormally coloured foliage make the most show for the money, and we love to advertise. The English don't. Nature almost never gives us purple or yellow leaves — except in autumn. *No place can be restful unless green is dominant.* Of purple, golden, and silver *tones* we get plenty for daily purposes in our ordinary trees, but bronze-leaved ashes and purple elms, plums, and catalpas are tiresome to live with. You may be greatly excited at the first sight of a huge blotch of yellow on the landscape, but when you come close you find that it is only an elm, oak, poplar, or box elder gone wrong. And after you have resolved about twenty such cases into mere yellow journalism, the sensation gets a bit sickening.

The plants just mentioned are what William Robinson calls "tree rubbish." The dignified and lasting members of the group are the purple beech and purple Norway maple. It is right, also, that we should pay big sums for Japanese maples, although they are uncertain about growing. But even these we overdo.

THE CUT-LEAVED EFFECT

Only one degree less vulgar than a preponderance of abnormally coloured foliage is a preponderance of cut-leaved trees. Must everything be shredded for us from breakfast food to the trees on our lawn? Why does any one want a mountain ash with leaves like an oak, or a hawthorn with leaves like celery, or an elm with leaves like a nettle, or anything with curled or hooded leaves?

The legitimate way to get cut-leaved effects is to use trees that are normally fine-leaved, not the abnormal varieties of maple, alder, beech, oak, elm, and linden. Whenever we want trees for thin, open effects, let us use our own deciduous cypress, Kentucky coffee tree, black locust, or Hercules's club, or else the Japanese

varnish tree. The light filters down beautifully through their pinnate leaves, and these trees live long.

We grossly overdo all trees with "tropical' or spectacular foliage, such as the large-leaved magnolia and the ginkgo. They are perfectly hardy and are not creations of man, but is that any reason why we should fill a peaceful scene with objects startlingly different from our environment? Our country, as a whole, excels England, as a whole, on variety, but too great variety on any one place is our national failing. I heard some Englishmen complain that the English landscape is monotonous. On the contrary, it is all the more home-like because a few tried and true kinds of trees appear everywhere. Some day our landscape, too, may look like the home of one big, happy family.

THE EFFECT OF FORMAL OUTLINES

What possesses us to plant so many trees that are living cubes, globes, cones, and columns? A few may be appropriate in the garden, but *rarely on the lawn.* The most conspicuous of these forms is the columnar or fastigiate. The Lombardy poplar is a living exclamation point. It was the first ornamental tree we bought in quantity. It spreads like wildfire in America and ruins many a fine landscape. A group of three or five makes a splendid break in the sky line, but whole streets lined with it are most unnatural and tiresome.

The nurseries are full of "tree pretenders" — such as the oak that mimics a cypress in outline. Let us forget these horticultural forms. After you have learned to know and love beech, tulip tree, hawthorn, horse chestnut, and other broadish trees, their columnar varieties look pinched and unhappy. When we want cones let us go to the trees that *naturally make cones,* but "not too all-fired perfect" cones *viz.*, the spruces and other evergreens.

I wish I could come back in five hundred years so as to find all the Kilmarnock weeping willows gone. The original mulberry has some dignity and interest but Tea's weeping mulberry on the lawn is simply ludicrous. May the good Lord send a special bug to devour all the horticultural "weepers," especially the maples, dogwoods, lindens, and oaks. In the garden the bug should spare them, especially if they form tea houses or summer houses for children but let no guilty weeper on the lawn escape. If we need pendulous foliage somewhere why not plant something that is *naturally pendulous*, like the Wisconsin willow?*

THE SHADE EFFECT

There is *no sense in planting any of the trees that we commonly plant solely for shade*, because they die too soon or get unsightly. If we need shade without delay we can build a veranda or summer house or transplant a big tree. And if we plant long-lived trees for other purposes the shade problem will be solved incidentally.

The English have an equally foolish passion for retaining old trees that are in the way, simply because they are old. "Most of us plant too thickly," says William Robinson, the trees "get too close and we neglect to thin them, the result being mouldy, close avenues, dripping, sunless groves, and dismal shrubberies."

Whenever our houses are made damp and mouldy by trees it is usually because trees with horizontal branches overhang them, so that there is no chance for air to circulate. The ideal tree near a house is an American elm, not the English, which is a most treacherous tree, dropping great limbs without warning. But the American elm seems doomed. This is too bad because we have no other tree that acts like an umbrella, leaving a generous space

* Weeping trees were reviewed in *The Garden Magazine*, Vol. V., p. 76.

for air currents between roof and foliage. The wrong kind of tree to plant near a house is an evergreen, which sticks its arms into the windows, whereas the vase-formed elm arches protectingly over the house and makes the best possible frame for the home picture. A horse chestnut or other dense tree stops too much sunlight and air. The next steps in advance will be to make pergolas a part of the house, construct outdoor sleeping rooms, screen verandas, and use vines on flat roofs as the Italians do for shade.

Any one who wishes an inspiring new point of view toward shade trees should read the chapter in the "English Flower Garden," called "Air and Shade."

THE AGE EFFECT

If your grounds are large enough for a tree that will grow a hundred feet high or more, plant an oak. (See plate 69). The grandest of American oaks is the white oak (*Q. alba*), and this is also the nearest equivalent of the English, which generally fails here. But the white oak is almost impossible to transplant and very slow. The quickest growing oaks are the pin, red, and scarlet.

Plant American beech and linden in preference to their English equivalents. Plant red and sugar maples in preference to the sycamore maple.

The following characteristic American trees will grow better here than in England, and have often attained *more than one hundred feet or one hundred years:* Honey locust, black walnut, pin oak, red oak, black oak, white oak (from seed).

The following *cannot be expected to last a century*: Birches, elms, poplars, willows, ailanthus, catalpa, box elder, silver maple, English hawthorn, or any kind of chestnut.

There are many ancient trees in Britain that seem thoroughly at home, but they were originally foreigners, *e. g.*, chestnuts, linden, larch, Norway spruce, and service tree. But practically all came from a related climate — that of Europe. A thousand years from now many foreign trees will be naturalized in America, and practically all will be from the Far East. *But America will never "find herself" until her own trees are everywhere in the majority.**

* For a list of books on trees see the end of Chapter XIV.

WHAT AMERICA CAN TEACH ENGLAND ABOUT SHRUBS

CHAPTER XVII

WHAT AMERICA CAN TEACH ENGLAND ABOUT SHRUBS

The only important material except water-lilies in which we have a striking climatic advantage over England — Why we have ignored our opportunity and have even started on a false scent

THE only material in which America has a striking climatic advantage over England is shrubbery. When my colleague, Mr. Leonard Barron, came to America, the one horticultural feature that struck him as new and strange was the *burst of spring*, especially the dramatic fortnight when the fruit trees are in bloom. For in England spring comes so early and gradually that March is a month of considerable floral charm, with its thousands of daffodils and Lenten lilies, its exquisite blue carpets of Grecian wind flowers, and its lambent sheets of gold wrought by the winter aconite. But in America March is a rough and flowerless month in the North, and spring comes with a rush when the orchards bloom. England's fruit trees are mostly hidden from view behind high brick walls in private gardens. And while Americans know comparatively little about amateur fruit growing for quality, we lead the world in commercial orcharding; consequently our whole landscape is a mass of shimmering white at the poetic moment of the year, just before the trees leaf out. Now, the largest group of flowering shrubs belongs to the same family as the fruit trees, and 90 per cent. of all our shrubs

join the mighty chorus that celebrates the death of our atrocious winter. (See Japanese crab, plate 70.)

Another dramatic moment comes in October, when the American landscape has more vivid foliage than the English. True, the biggest masses of colour are supplied by the trees, but the shrubs give the finishing touch to a perfect picture. *England can never enjoy such an autumn show* because her cool and moist summers prolong growth, while our hot and dry ones promote maturity. England can never produce so thrilling a spring flower show, because her autumn is cool and moist and therefore the shrubs cannot properly ripen their wood and make good buds.

The neglect of shrubs in English gardens will be apparent if you examine any of the sumptuously illustrated books on English gardening. The greatest collection of large photographs on this subject is called "The Gardens of England," yet I have just turned over the two hundred and seventy-two plates thus far published without finding a single picture in which flowering shrubs play an important part! In American gardens shrubs have always been a common feature, and the most precious old gardens we possess generally contain a few grand old bushes of such height and magnificence as one never sees in the ordinary mixed shrubbery.

But we need not "throw out our chest like a Russian sleigh" because of this one advantage. For it will be at least three hundred years, in my opinion, before America becomes one great garden, as England is. And our advantage in deciduous shrubs is more than counterbalanced by her advantage in evergreen shrubs, especially hybrid rhododendrons. For these gorgeous plants not only have their showy bloom, but their magnificent foliage is full of inspiration all winter, while deciduous shrubs, broadly speaking, look naked and shivery in our climate. The English

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70 JAPANESE CRAB (*Pyrus floribunda*), EXAMPLE OF THE MANY APRIL-FLOWERING SHRUBS WHICH BELONG TO THE FRUIT TREE FAMILY AND MAKE OUR "BURST OF SPRING"
See page 196

DWARF HORSE CHESTNUT (*Aesculus parviflora*). EXAMPLE OF THE MANY SLOW-GROWING BUSHES THAT ARE CROWDED TO DEATH IN THE ORDINARY MIXED BORDER BY THE QUICK GROWING KINDS. *See page 203*

AN ASH-LEAVED SORBARIA FROM AFGHANISTAN (*Sorbaria Aitchisoni*) WHICH OUGHT TO RUN OUT OF OUR GARDENS THE MISERABLE SUMMER-BLOOMING SPIREAS THAT HAVE STIFF CONES OF PURPLISH FLOWERS

winter is naturally mild, but the ubiquitous English laurel (which we cannot grow) makes it cheerful and beautiful, while ours is bleak and ugly. I cannot understand why horticultural writers nearly always jumble these two elements in the same article on "shrubs." For good landscape gardeners rarely put both in the same shrubbery border. And we can have no clear thinking or good design unless we make a sharp distinction between precious and worthless material for winter since, in the North, this comprises five eighths of the year, or from the middle of October to the middle of April. Therefore, the present article deals only with the deciduous bushes.

And now comes the third great advantage of our shrubbery, for *we can excel England on red berries that last all winter and on shrubs with brightly coloured bark.* (See lower picture on plate 73.) And just as the Canadians have made their long, steady winter an attractive season for tourists by their picturesque sports, so the fickle winter of the northern United States can be made to draw people from all parts of the world to experience the unique charm of highly coloured berries and branches.

Now, then, *the threefold superiority of our shrubs* is apparent — the burst of flowers in spring, the vivid foliage in autumn, the brilliant berries and branches in winter. But have we developed our shrubberies along these natural lines? Not at all. On the contrary we have blindly and slavishly followed European precedents. We import all their man-made freaks and dot our lawns with them, so that they look like Joseph's coat turned inside out or the side-shows of a circus. For, every great personality among the shrubs that we ought to know and love for its own sake has its cut-leaved, weeping or purple-foliage variety, and as to such gaudy stuff we are simply mad. It is worse than a crime to plant

one's place chiefly with such truck; it is a *blunder.* The reasons for this judgment are explained in the chapter on trees.

The only one of nature's suggestions we have followed is that which culminates in the "spring garden." (See plate 73.) A superb example of banked shrubbery is on the estate of the late H. McK. Twombly, at Madison, N. J. Sometimes a whole estate is made one great spring garden, nearly every plant being chosen because of some attraction it presents between the middle of April and the first of June. Personally, I like better the year-round home of Professor Sargent, where the spring garden is only one of many beautiful features, all well proportioned, related, and secluded. But I have no quarrel with wealthy Americans who choose to glorify spring to the utmost, so that they may walk amid a dream of beauty for the six weeks such an estate is used by the family. For private specializing on a princely scale gives us visions of new and better things that every one may enjoy when the world gets better organized.

But for the ordinary person an exclusive specialty is all wrong. Perhaps the quickest way to make America beautiful is to have a rosarian in one house, a dahlia crank next door, and so on, but the ideal is to have *every place interesting the year round.* The obvious reason is that the vast majority of us cannot afford more than one home at a time. And in order to make a place attractive every day in the year we ought to put more thought on shrubs than on any other plants. There are many reasons for this, but it is sufficient that they give us brighter colour in winter than evergreen and at less expense. On a great estate trees may be a bigger item, because they form the framework of every home picture, while shrubs are only the trim. But city and suburban lots are so small that only a few large trees, if any, are desirable, and

72. THE AZALEA GARDEN AT KEW (A MAGNOLIA IN THE CENTRE). AZALEAS ARE EVEN MORE GORGEOUS WHEN PLANTED IN FRONT OF RHODODENDRONS, BECAUSE SHRUBS THAT BLOOM BEFORE THE LEAVES NEED AN EVERGREEN BACKGROUND.

therefore we must always look to shrubs as the main attractions, because they are more permanent than other flowers and cheaper than evergreens.

Therefore, I believe, the instinct of the American people in making shrubbery a national institution is thoroughly sound. The American idea is to have the *front yard of every small place composed of an unbroken lawn flanked by irregular borders of shrubbery*. This frank, open treatment, which subordinates the individual's rights to the park-like effect of the whole street, is a fit expression of a democratic people. But such publicity is abhorrent to the English, with whom privacy is the dominant passion. Therefore in England front yards in city or suburbs are surrounded by a hedge or wall, and generally contain straight rows of broad-leaved evergreens, such as holly, box, and aucuba. The almost daily showers in England keep these noble decorative plants free from dust. In all parts of America the summer is too dry for mile after mile of streets lined with broad-leaved evergreens.

But if we have the right instinct about shrubbery, we are pitifully weak in carrying out the idea. For *the ordinary mixed shrubbery is attractive only two months of the year and an eye-sore for five*. This is simply because the only shrubs we all know are those with showy flowers. Consequently, when ordering plants for a new shrubbery we merely write down the names of all the glorious old-time favourites such as lilac, azalea, mock orange, spirea, and hydrangea, all of which are totally devoid of interest for at least five eighths of the year, while most of them are also commonplace in foliage. The same is true of the vast majority of shrubs that are famous for their flowers. It is absolutely impossible to get artistic effects by this method. We must get rid of the pestilential old idea that shrubs are only good for flowers.

The nurserymen ought to stop writing "flowering shrubs" in their catalogues instead of "deciduous shrubs." And they ought to quit booming the few shrubs that flower in July and August, because we do not need excitement in hot weather; we need repose, and the most reposeful colour then is green. Summer is the natural resting time for shrubbery, between spring flowers and autumn fruits, and our natural time to enjoy the texture of foliage. It is all wrong to try to make the shrubbery brilliant in midsummer with a lot of loud-mouthed purplish-magenta spireas like Anthony Waterer, or "ever-blooming bores" like hydrangeas. It is bad enough to have our autumn landscape made monotonous by too many top-heavy hydrangeas in every yard, without filling the shrubbery in summer with these unnatural double flowers. A "night shift" may be proper at the glue factory, but we don't want our shrubberies to look as if they were working overtime. In other words, *what we ought to have in every home shrubbery is flowers in spring; foliage in summer; colours in autumn; and berries and branches in winter.*

All this we can have by planning our home grounds with reference to twelve months instead of two or three. Forget all about the old-time favourites for a minute. You need not sacrifice any of them, but try this easy plan and your eyes will be opened to a new world of beauty. It is not even necessary to know one kind of shrub from another. All I ask is that you *make a list of the twelve months* and have two or three attractions for each month. Now list your favourites and you will see that they help you only in two or three months. The best way to fill the big gaps is to employ a landscape gardener. If you can't afford that, go to a nursery and fill in your blanks from the shrubs themselves, instead of checking off names in an alphabetical list. If you can't do that,

make up your list with the help of good classified catalogues and the lists of shrubs for special purposes referred to at the end of this chapter.

The only part of this programme that seems hard is the selection of summer or foliage effects. But here's the answer to that — Cornus and Viburnum. (See plate 73.) We've got to have lots of those bushes anyhow for autumn and winter effects. They may not be the showiest things in the world when in bloom, but for texture of foliage, play of light and shade, and individuality of bush they are hard to beat. If you want to wake right up to our "heaven-born opportunity" with shrubs, go to Boston in summer and drive through the Arnold Arboretum. For there you will see all the long-lived American and Japanese bushes that have the noblest or most graceful personality, and you will see how cheap and tawdry in comparsion are such Coney Island muckers as the golden elder and purple-leaved plum. And then you will understand what the best landscape designers and nurserymen mean by such words as these: "Flowers are not the main object; they are only an incident. The principal thing is the form, texture, and density of the foliage masses and their way of carrying lights and shadows." I used to think that such talk was only "hot air" by the picayune brand of expert who exalts the technical above the human — the letter above the spirit. But it's plain horse sense. For any particular shrub blooms only a fortnight or so; what *you have to live with every day for seven months is foliage.*

I am sorry to disappoint you if you were expecting me to tell you how to copy English effects with shrubbery, for there aren't any worth worrying about. Of course, I took about a bushel of notes on beautiful shrubs I saw there, but when I came back I

threw them away, for they are no use to us. We must hew out an entirely new path. And it would be a sin and a shame for me to crow about Cornus and Virburnum and Hydrangea, simply because England can never touch us there. For the big fact is that we are three hundred years behind England on gardening and we ought to "get busy." The irregular shrubbery border is "our game," but we play it in the wrong way, and so the one thing we need most is not a list of material, but a *better way to plan a border!*

No book can teach the people the art of design. But here are a few rules that any one can use with better results than the haphazard methods we commonly employ. First draw a diagram of your home grounds to scale. Then place your trees where they will shut out unsightly things and frame pictures of beautiful objects in the distance, such as a church spire. Then indicate where big bushes are necessary to hide what you don't want to see, and leave blanks where they would cut off the good views. Then make a bold, irregular outline for your shrubbery border, leaving room in front of the tall shrubs for low ones. The rest should be unbroken lawn.

Next comes the selection of the best bushes for the chief mass effects — say twelve kinds, one for each month, and then the arrangement of these. Don't try to select all your bushes now, and don't put off arranging them until the shrubs arrive. Make twelve slips, or one for each important period — April effect, May effect, and so on. Add to each slip the ultimate height of the bush and the colour of the flowers. This is the easiest way to secure "finish" and avoid colour discords.

The next job is to separate the slow-growers from the quick-growers, for the former cost most and are soon crowded to death by the latter in the ordinary mixed border. The quick-

growers are privet, spirea, mock orange, hydrangea, golden bells, deutzias, red-twigged dogwood — anything you can buy in the form of one or two-year-old plants at eight dollars to twenty dollars a hundred. This is the stuff that will attain the height of a man in three or four years. The reason you can buy it so cheaply is that it can all be easily raised from cuttings; whereas the costly shrubs have to be propagated by slow methods, such as grafting, layering, or seeds.

The quick-growers are to go in the back and the slow-growers in the front of the border. Typical slow-growers are lilacs, Japanese maple, white fringe, pearl bush, Japanese red bud, dwarf horse-chestnuts (plate 70), and azaleas (plate 73). These cost about fifty cents each or more.

Now draw the foundation line of your house and indicate all the most important windows, because we want a beautiful picture from each window and each view is to be strikingly different from every other. Nearly all the foundation line should be hidden and the ideal material for banking against a house is broad-leaved evergreens. Consider this material first, as it is the costliest of all.

Then take the view from each window in turn. Don't put your big flower show opposite the most important window, because flowers are short lived. Put a winter effect there, and be sure it has good foliage in summer. Hold the list of effects by months in your hand and think how twelve bushes of each kind would look from each window when the plants have grown to the height of a man. Thus you will be sure of strong, simple mass effects that are good to live with, not a weak, spotty, distracting mixture.

Next indicate directly on the plan where the conifers or other evergreens are to stand. You must do this now, because your winter berries and branches will be much more effective if

seen against an evergreen background. The same is true of forsythias and all the April flowers, since these bloom before the leaves.

Now it is safe to indicate where each tall bush is to stand. When these are full grown they will be six feet apart and for the finished picture you may not need more than six of a kind in any one group. But the right way is to order three times as many small plants as you need and set them two to four feet apart. This always seems wrong to a beginner. It looks just like a nurseryman's scheme to sell more plants. But landscape gardeners and park superintendents have no such interest and at a recent convention the sentiment was practically unanimous in favour of the old rule, "Plant thick, thin quick." One reason is that if you plant far apart, the place looks raw the first two years. Again, it costs more for cultivation. Again, the bushes actually do not grow as fast, because they are too far apart to shelter one another from drying winds, etc. On the other hand, if you plant thickly and begin thinning the second year, you can sell the larger plants you don't need or move them to some other part of your grounds. That's the cheapest and quickest way to get the best bushes. Don't try to save three years by buying extra large bushes, except in the case of a few near the house or in the garden where immediate effect must be had. In three years small shrubs will catch up with big ones. That is not the case with trees.

THE FINISHING TOUCHES

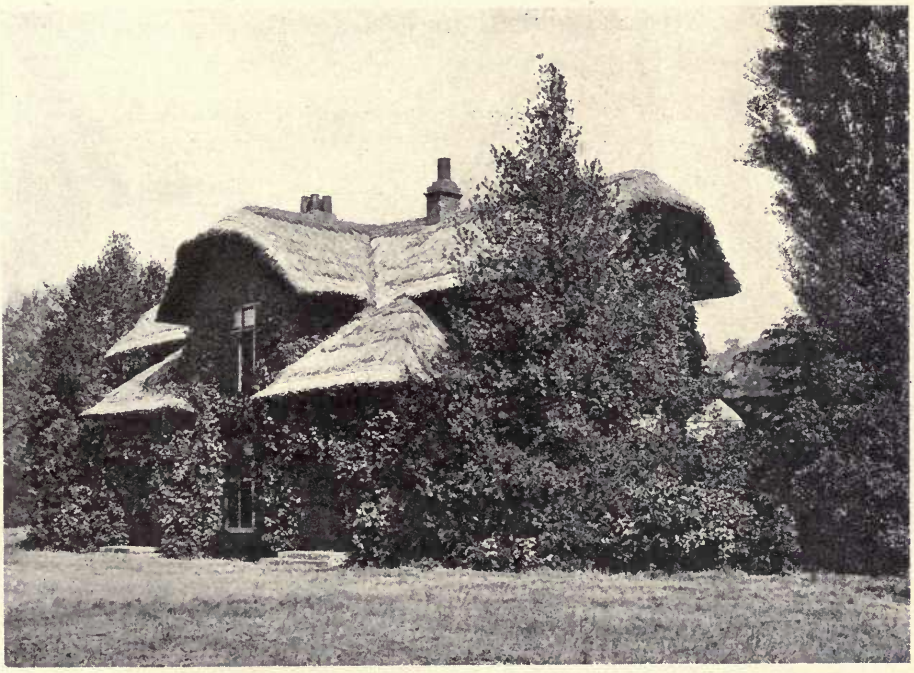
Last of all come the finishing touches. You want some edging plants that arch over to the grass, so as to make an easy transition from lawn to tall shrubbery; therefore, choose arching bushes that grow one to three feet high like *Deutzia Lemoinei*,

73 THE JAPANESE SNOWBALL (*Viburnum tomentosum*, var. *plicatum*). IT HAS VERY BEAUTIFUL FOLIAGE; MOST SHRUBS FAMOUS FOR THEIR FLOWERS HAVE NOT. *See page 201*

THE WAYFARING TREE (*Viburnum Lantana*). A LONESOME EUROPEAN EXAMPLE OF A TYPE OF BEAUTY IN WHICH AMERICA CAN BEAT ENGLAND. FOR WE HAVE MORE NATIVE SPECIES OF VIBURNUM AND CORNUS THAN ANY OTHER COUNTRY. THEY HAVE FLAT CLUSTERS OF WHITE FLOWERS, FOLLOWED BY ATTRACTIVE BERRIES, AND MANY OF THEM ARE RICH IN WINTER BEAUTY. *See page 201*

74 CLUSTER ROSES ALLOWED TO CLIMB UPON A PINE

VIRGINIA CREEPER IN LONDON TRAINED SO AS TO SEND DOWN LONG STREAMERS — A LESSON FOR OUR LARGEST CITIES IN AMERICA. *See page 212 and plate 39*



ENGLISH IVY DOES NOT SMOTHER A BRICK HOUSE BUT IT MUST NEVER BE GROWN ON WOOD. IT IS THE MOST VALUABLE EVERGREEN CLIMBER IN THE WORLD. QUEEN'S COTTAGE, KEW. *See page 212*

CLOSED
STACKS

Japanese barberry, Thunberg's spirea, Stephanandra, and yellow-root (Xanthorrhiza). The first thing the beginner thinks of is the spice — such as purple-leaved barberry and variegated dog-wood. It should be the last to enter into the garden scheme.

When planting time comes interlace your big masses instead of keeping each kind in an absolutely solid mass. For instance, suppose you have twelve cranberry bushes that are to stand next to twelve common barberries. Place one or two cranberries a little inside the barberry mass and *vice versa*. Then your mass effects will be just as pure and strong as ever, but they will not seem too studied. That is the last touch that foresight can give. The crowning loveliness age alone can bring.*

* Apgar's "Ornamental Shrubs of the United States" tells how to recognize 621 wild and cultivated kinds. For fuller descriptions and for cultivation Bailey's "Cyclopedia of American Horticulture" are generally the most helpful. As to landscape value the following articles are valuable.

(G. M. and C. L. mean *The Garden Magazine* and *Country Life in America*. The numbers refer to volume and page.)

"Shrubs and Where to Put Them," C. L. 4:207 12:48
'How to Buy Trees and Shrubs Economically," C. L. 12:48.
"What Must be Planted in Spring, not Autumn," G. M. 7:140.
"Shrubs for Fall Planting," G. M. 6:129 and 131.
"Planting for Winter Comfort and Beauty," C. L. 9:155.
"Plants Attractive both in Flower and Fruit," C. L. 15:490.
"Ornamental Fruits," G. M. 7: 296, 344; 8:10, 70, 134, 184, 236, 292.
"Flowers the Year Round," C. L. 11:534.
"Shrubs That will Bloom This Year," C. L. 13:500.
"Trees and Shrubs that Bloom Before the Leaves," G. M.5:138.
"Flowering Shrubs from April to November," G. M. 3:30.
Azaleas, C. L. 11:495, and G. M. 5:218.
Barberries, G. M. 4:122.
Cornus, C. L. 11:35.
Hydrangeas, G. M. 2:66.
Lilacs, G. M. 1:232.
Spireas, G. M. 3:206; 7:284, 384.
Viburnums, C. L. 11:38.
"Prune Your Own Shrubs," G. M. 1:225.
"How to Prune Shrubs," C. L. 3:164.

ENGLISH EFFECTS WITH HARDY CLIMBERS

CHAPTER XVIII

ENGLISH EFFECTS WITH HARDY CLIMBERS

The fine art of decorating good architecture and transmuting the bad, marrying vines to trees, and throwing a veil or mist over evergreen shrubs like rhododendrons

I AM sometimes tempted to believe that climbers are the most valuable of all ornamental plants, because they are *the only ones that have the power of transforming ugliness into beauty.* And America has a thousand times as much ugliness to conceal as England. English houses are built of brick or stone; we still live in the age of wood. England has evolved a style of her own; we have not, and everywhere we see anarchy in domestic architecture. As you approach an English village the whole collection of houses seems beautiful and you are impressed by its permanence, its national character, and the ever-present sense of proportion. The morning I returned to America I saw my native land with new eyes — a riotous array of wildly shaped and wildly coloured wooden buildings — pretentious and perishable. Our country is beautiful enough, but the works of man do not harmonize with it as they do in England. Until we build permanently and in a style of our own, our greatest need will be something to hide the ugliness of most of our buildings.

The worst of it is that you cannot cover a wooden dwelling without seeming to *smother* it. Either it seems to pant for air or else it tends to look damp and unhealthy. On the other hand, a brick cottage can be covered with ivy without making it look

close and stuffy. In winter it will actually be warmer and cosier; in summer it will be cool and country-like. Therefore I shall hail the day when the wooden age passes. For when we have to build with costlier materials, every detail will be more carefully considered, the old instinctive sense of proportion will return to the people and we shall evolve a national style.

This is not mere "art talk." I do not ask you to accept these statements on authority. Take any street car in any city and you will see that most people simply choose the climbers they happen to like without any special thought of fitness. Yet the most artistic people that ever lived took as their mottoes "fitness" and "nothing too much." Clearly then, the first step is not to order "best sellers" from a catalogue but *study the house we live in.* We must decide how much is good architecture and how much is bad; how to enhance the former and transmute the latter.

CLIMBERS FOR HOUSE WALLS

Meanwhile a man's first duty is toward his house walls, so let us consider them before we do the porch. And the first big fact is that climbers are so easy to grow and so long-lived that *questions of fitness are of far greater importance than details of cultivation.* England can teach us relatively little about new kinds of climbers or better ways of cultivating them, but we have everything to learn about artistic ways of using them. We are so ignorant that we often use wood-destroying climbers on wooden houses, and as to our public taste — well, we live in what might be called the "Crimson Rambler period." Before you go to England you dimly realize that we are in the experimental stage. But in England any one can see that most of the experiments we are trying have long ago been settled. In old countries there has grown

up a consensus of opinion or public taste. And better still, certain principles have been evolved.

The first principle is that good architecture should never be obscured, and, conversely, bad architecture should be not only hidden but transmuted into beauty. Thus, on good architecture we should use climbers that are slender and decorative, not rampant or commonplace. Good ornamentation will be hidden by Japan ivy. Nice proportion will be obscured by Virginia creeper. Hall's honeysuckle is too commonplace in leaf for walls of classic beauty. On the other hand, the leaf form of the grape is of undying charm. Every kind of clematis is light, airy, graceful. The Crimson Rambler is too gaudy, but the memorial rose is sufficiently slender and decorative.

Now let us take the case of bad architecture. Japan ivy will hide more ugliness than anything in the world — except charity for it will cover a brick tenement six stories high. But, please notice that Japan ivy and all other *close-clinging climbers* outline the object they cover and *have no power to transmute ugly lines into beautiful masses, as the loose-hanging climbers do.* A useless cupola or "fake" balcony may be mercifully softened by Virginia creeper but excrescences and bad lines are *accentuated* by English or Japanese ivy.

The next question is whether the house is of wood, brick, or stone. If it is of wood it is sheer folly to use the *wood-destroying climbers.* English and Japanese ivy and the climbing euonymus send out roots from the stem and these make the wood rot. Wistaria is the *boa-constrictor* among plants, weakening pillars and prying off shingles. So, too, does the trumpet creeper. All other climbers are safe, provided we do not *let them grow directly on the wooden walls.*

For when you wish to repaint your house you will find that the tendril-bearing and other *self-fastening climbers are fragile.* It is a big job to take them down, and you are sure to harm them, while the *twiners are tough and can be taken down* and replaced more easily.

If you have a brick or stone house you can grow any kind of climber directly on the walls, for there is no need of painting. But now the most important question becomes *colour harmony.* If you doubt this walk down any street in July and watch the Crimson Ramblers and purple clematis swearing at the red brick walls! The only safe thing to use against red brick are white flowers and green foliage. The warm colours in brick and stone are the reds and browns; the cool ones are the grays, blues, and yellows. Against light, delicate or neutral backgrounds you may use strongly coloured flowers, like red roses, orange trumpet creepers, purple and rose clematis and yellow ramblers. But the brick that is warm in winter looks too hot in summer and to cool it you can do one of two things. First swathe it with English ivy (plate 74), Japanese ivy (plate 76), euonymus, or Virginia creeper (plate 74). Second, you may decorate it with *Clematis paniculata,* white cluster roses, or white wistaria and the like.

The great practical difficulty with brick and stone is that the tendril-bearers cannot get up a smooth surface, while the twiners must always have support. Of course, chicken wire or wooden trellises can be used, but they have a trifling look against massive buildings. So far as I know, the architects have never solved the problem of growing slender, flowering climbers on smooth brick or stone. In such cases people generally use the self-climbing Japanese or English ivy, the euonymus or the self-

75 AN ARCH OF BLUSH RAMBLER ROSES. ONE OF THE MANY INTERESTING WAYS OF TRAINING CLIMBERS, TO WHICH WE SHOULD GIVE MORE THOUGHT. *See page 223*

climbing variety of Virginia creeper. How little imagination we commonly employ is shown by the thousands of wistarias trained up iron rods in New York. They look to me like enchanted princesses with their arms frozen to their sides, until some good fairy comes to release them. After that they may entwine balconies, embellish window sills, and envelop the whole building with an atmosphere of poetry.

THE BEST WAYS TO TRAIN VINES

Only two good ways of training are known to me. If I had a beautiful, well-proportioned house, especially in the Colonial style I should have my architect design once for all a complete and permanent system of trellis or lattice work which would be attractive even when not covered. Then I should be certain that just the right proportion would be covered and that the covered part would not have to be repainted.

But if I had a commonplace or ugly house I should put up yard-wide strips of chicken wire (or something stronger) from the ground to the roof, fastening them at top and bottom in such a way that the climbers could be taken down and put back with entire ease and without damage.

CLIMBERS FOR GARDEN WALLS

The principles governing climbers for house walls apply also to garden walls, but the garden wall gives us some splendid opportunities in addition. I used to dread the idea of high garden walls, but I believe we must borrow this custom from England. The seven reasons therefor have been stated at the end of Chapter IX. Only one will be developed here. The shelter of the garden wall enables Englishmen to grow many of the greatest treasures of

subtropical regions including shrubs trained like climbers. Among such treasures are the true myrtle, the poet's laurel, *Magnolia grandiflora*, the large-leaved Algerian ivy, the pomegranate, laurustinus, and camellia — an intoxicating array of evergreens when contrasted with the solitary pair that are hardy with us — ivy and euonymus.

Of course, the Bostonians could never grow these evergreen climbers outdoors even behind high walls, and even at Philadelphia these plants might not be both hardy and evergreen. But New York and Philadelphia would doubtless pick up other treasures they could enjoy to the full in no other way, *e. g.*, the evergreen magnolias, and a large-leaved ivy from China, and the cherry laurel from Schipka Pass. Moreover, it is possible that, on their north and west walls, Japanese honeysuckle would hold their leaves all winter; also the memorial rose and the scarlet honeysuckle. And by the same device Baltimore and Washington might be able to grow some of the plants that are evergreen at Augusta, such as the Cherokee and Macartney rose, the cross vine, the Carolina jasmine, the Confederate jasmine, Irish and Algerian ivy, the dwarf fig, the Constance Elliott passion flower and several bignonias. The accuracy of these examples cannot be vouched for. The list is merely suggestive.

Among the famous deciduous plants from warmer climes which the English (in the extreme South) can grow on walls are the Ceanothus of California, the Lapageria of Chile, and the Clianthus of Australia. But I doubt if any climbers from those countries can ever be a great success east of the Rockies. For a plant that has never encountered zero weather in its own home can never do so elsewhere. In England the great problem is to get enough sunshine in summer to ripen the wood sufficiently to withstand the mild

English winter where zero weather is unknown. South walls help them solve that problem. But in America no walls can keep roots from freezing in zero weather. Nevertheless, I have faith to believe that walls would help us grow in any given locality many fine plants that belong to the South. For example, the winter sweet and winter jasmine will open their fragrant flowers in March or earlier in New York and Philadelphia, and *Forsythia suspensa* is very beautiful when planted above a wall and allowed to hang down. Philadelphia can grow the white jasmine of the poets on garden walls. And there are three special beauties in England which I hope some of my readers will try.

The first is the tamarix, with feathery gray foliage and feathery pink bloom, which never looks well as a shrub (except when kept low as on plate 105), but is unspeakably lovely when trained against a wall, as at Trinity College, Cambridge.

The second is *Xanthoceras sorbifolia*, which has foliage like a mountain ash and white flowers marked with pinkish purple. I saw a specimen about twenty-five feet high on the house of Mr. R. Irwin Lynch, the scholarly and companionable curator of the Cambridge Botanical Garden.

The third is lemon verbena, which sometimes covers a space twelve feet square on English house walls. It is the only wall plant with fragrant foliage that I know and it must be pleasant to have every breeze from April to September bear the odour of lemon into the house. I wish my friends in Baltimore, Cincinnati, and St. Louis would try this.

A moment ago I said that garden walls may shelter more precious climbers than house walls. They have another advantage. Even if you desire a perfectly smooth brick wall there is a good way of training climbers that cannot climb alone. For,

when the walls are building, you may lay in the mortar at regular intervals iron hooks or something that will not be as objectionable on garden walls as on house walls.

CLIMBERS FOR PORCH AND ARBOUR

After considering the house and garden walls a man's next duty is to study his *porch and pergola*, and these introduce a new problem — the column. Here again the first question is not, "Which vine do I like best?" but "Is the architecture good or bad, refined or rustic?" For English experience seems to have evolved this principle: *On beautiful columns foliage is more important than flowers; on rough columns flowers seem more important than foliage.*

This principle grows out of the fact that leaf forms are displayed to the best advantage by a white background while flowers are usually best set off by a dark background.

Therefore, if your porch or pergola has classical columns of stone or concrete, the most appropriate climbers are those that have leaf forms of classic beauty, such as the wild grapes, the akebias, the kudzu, cinnamon, and Madeira vines, and the wonderful new species of Ampelopsis from China, in all of which the flowers are of secondary importance. Among the flowering climbers, roses, clematis, and wistaria have sufficient beauty of leaf form, but the following may be unsuitable: Honeysuckles tend to make amorphous masses; Dutchman's pipe has too gross a leaf; bitter-sweet is a little commonplace in leaf and wild in growth; matrimony vine too rustic.

On rough or temporary pergolas, the appropriate thing seems to be an exuberance of bloom. We often cover a whole porch or pergola with one kind of climbers, especially Crimson Rambler,

which is too gaudy, and ought to give way to more delicate colours like the pink of Dorothy Perkins. The English believe that a variety of climbers is usually best on a pergola, provided the whole structure is well supplied with foliage, because then you have ever-changing interest, whereas the Crimson Rambler pergola flashes for a few weeks and is gone until another year.

Another thing we must remember about slender columns is not to overpower them with mighty growths of wistaria or trumpet creeper, which may weaken the pillars of piazzas.

Our greatest fault, however, is having too little luxuriance, for a pergola without vines on top is a failure and an absurdity. England goes to the other extreme. Luxuriance is too easy to get there and Mr. Robinson complains that many of their arbours are dank, close, sunless. In that moist, cool climate it is not so important to have shaded walks and covered ways as in a hot, dry climate like ours. But in both countries it is important not to have a porch or arbour smothered with vines. The effect should always be light and airy. Physical comfort alone would dictate this, but it is pleasant also to see all the leaves stirred by fresh air and an ever-changing play of light and shade on the floor, both in the daytime and moonlight.

One of the prettiest effects I saw in England is that of the Japanese wistaria (*W. multijuga*), which has clusters two or three feet long. These strings of bloom are so loose that they are not as showy on the ordinary porch as the common or Chinese wistaria, but when they are trained to hang down from the edges of a roof they have a liquid loveliness that is unsurpassed. The idea is, of course, Japanese but often one sees it well executed on English summer houses.

But the greatest wonder I saw in England is the collection of

new species of Ampelopsis and Vitis from China. At Coombe Wood I had a feast of colour and form that I shall never forget. And to American nurserymen and collectors I would say, *Wake up, try all the new species of Ampelopsis you can get.* They may make a great difference in the appearance of American homes and gardens.

CLIMBERS ON LIVING TREES

Another line of effort in which England is ahead of us, though still groping her way, is the art of growing climbers on living trees. Nature suggested this, for the woodbine sometimes drapes the hawthorn tree with a mantle of fragrant, purplish flowers and *Clematis Flammula* often adorns the hedgerows in August with myriads of white stars. The most famous case, however, is ivy and oak. And in our own woods every one has seen wild grape throwing up its strong ropes to the tops of the highest trees, and Virginia creeper mounting the tallest elms.

Whether this is the most artistic way to grow climbers, as many believe, I shall not attempt to decide, but certainly it is beset with the greatest and most interesting difficulties. If the climber is too strong for the tree it suggests a most unpleasant thought — strangulation, murder. And this result is sure to occur if wistaria or trumpet creeper are planted beneath small trees. On the other hand, delicate and high-bred climbers are likely to be starved by the roots of strong trees, so as to suggest poverty and failure.

The æsthetic dangers are also considerable. Nature does this thing sparingly and so should we. To treat a whole avenue in this style, or even a majority of the trees on a lawn, would expose us to ridicule. Again, the English sometimes make a stupid mistake in allowing ivy to grow on beech. It is a crime to let so

weedy a plant as ivy kill a noble beech, but to cover the native loveliness of a beech trunk with anything at all is worse than a crime — it is a blunder. We ought never, or rarely, to obscure the fine tree architecture of birch, mountain ash, or flowering dogwood, or even such rough customers as hickory, honey locust, and sweet gum, for their ruggedness has perennial charm. Why not use climbers only on trees that have commonplace bark? One may shrink from calling oak, elm, maple, ash, poplar, and the nuts commonplace as to bark, but no one can describe their bark in such a way that people will know them by the bark alone. Such trees make a safer list with which to experiment.

The most perfect marriage I have heard of between a deciduous tree and a deciduous climber is that of wistaria and locust, for both have pinnate foliage and flowers of the pea type. If you use the white-flowered wistaria, there will be a third point in common. This combination is beautifully described by Neltje Blanchan in "The American Flower Garden."

The most famous example, however, is that of climbing roses on any kind of deciduous tree. England and California have a great advantage over the North in this respect for they can use larger and better varieties and have fewer insect enemies to contend with.

The surest combination we can have is Virginia creeper on elm, and a most appropriate one, for the leaflet of the climber has practically the same shape as that of the tree. But when you grow Virginia creeper on pine you get a contrast of leaf forms that is almost startling. And, since evergreens are usually narrow-leaved, while climbers are usually broad-leaved, we should

feel our way more cautiously before training climbers upon conifers.

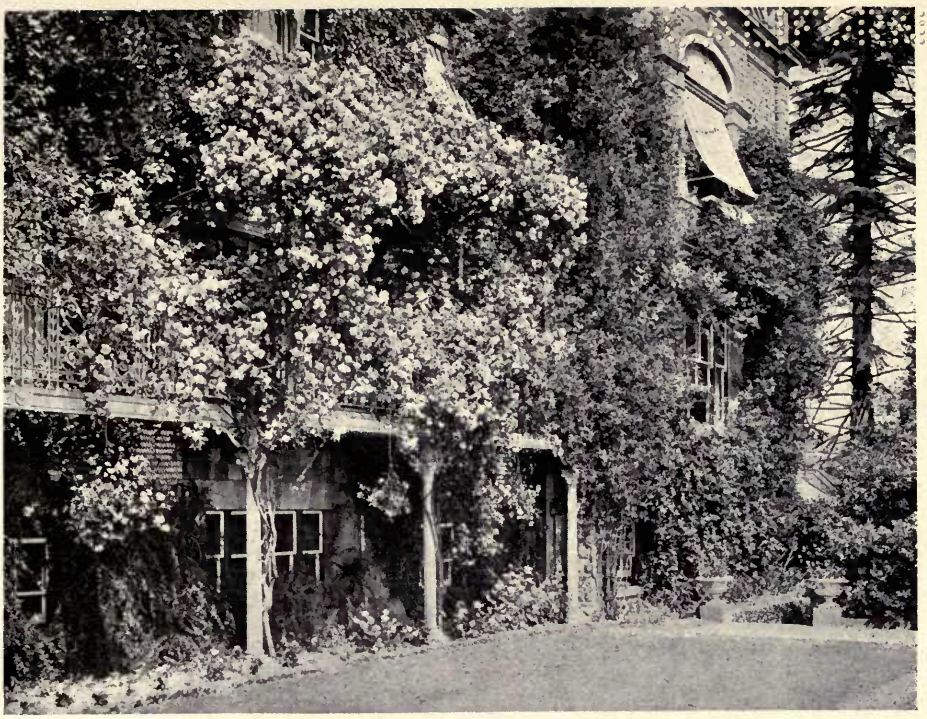
CLIMBERS ON EVERGREEN TREES

The English often allow ivy to grow up Scotch pine and Norway spruce, but this seems altogether too strong a contrast in form and texture. And there is an even greater danger — the danger of destroying the symmetry of an evergreen tree. How foolish it would be to grow any climber on Colorado spruce or concolor fir! For a branch lost by a conifer can never be replaced, and therefore the whole game is to keep evergreens symmetrical as long a time as possible.

On the other hand some of the evergreens we plant the most are the first to lose their symmetry, *e. g.*, Scotch and Austrian pine, Norway spruce, silver fir, and arborvitæ. English conifers, as a rule, look happy; ours do not. They soon get thin and ragged. Why should we not conceal the defects of these thin trees that have lost their lower branches?

What does nature do? She sometimes throws a veil of wild clematis over pitch pine, and on Long Island, Mr. Hicks tells me, she sends scarlet honeysuckle up the red cedars. In Japan, she trains wistarias on her giant pines.

In English gardens I saw a very good effect from wistaria on yew, which we could reproduce on hemlock. At Gravetye I saw Mr. Robinson's famous combination — clematis on yew. And there, I believe, is the principle that should guide us. If we grow climbers upon conifers, let us choose what Mr. Robinson calls the "lace workers," not the kinds with big, showy flowers. Jackman's clematis would doubtless be a failure in every way. What we want is fleecy clouds of small white flowers, such as we can get from *Clematis paniculata* and *Virginiana*. There are also two



ONLY IN THE SOUTH AND ON THE PACIFIC COAST CAN WE HAVE LARGE, DOUBLE ROSES BLOOMING ALL SUMMER AND CLIMBING TO SUCH A HEIGHT AS THIS. RIVERHILL, SEVENOAKS, KENT. *See page 222*

A HOUSE IN MANCHESTER (THE ENGLISH PITTSBURGH) TRANSFORMED BY JAPAN IVY. A BEAUTIFUL GARDEN IN THE HEART OF A GREAT CITY. HOME OF MR. GEORGE SYDENHAM. *See pages, 212, 223*

climbing hydrangeas, one of which grows at Dosoris on a tree trunk.

A combination suggested by Miss Duncan sounds most artistic, *viz.*, wistaria and trumpet creeper on the same tree. They supplement each other in time of bloom and give a complete change of colour, but both have similar, pinnate leaves.

However, I must not be dogmatic about large flowers, because I have never seen Miss Whitney's trumpet creeper bloom on her white pine at Westbury. I did see this combination in winter, however, and am bound to say it was the most perfect marriage between evergreen tree and deciduous climber that I have ever seen. It looks as if the golden wedding might be celebrated before long, as both parties are hale and hearty. The pine is about seventy-five feet high and the vine has grown to the top.

We often make the mistake of planting a climber near the trunk of the tree. It is better, both from the cultural and pictorial points of view, to plant them ten or twelve feet away and train them on inclined poles until they reach the lower limbs. Then you get the effect of lianas in the tropical forest or of wild grape in our own woods.

CLIMBERS ON EVERGREEN SHRUBS

But the climax of delicate beauty in this line of work is to throw a veil over the evergreen shrubs. The one thing that every Englishman yearns to do, and cannot, is to grow the flame flower on holly. The flame flower (*Tropæolum speciosum*) is a gorgeous scarlet nasturtium which glorifies the humblest cottage in Scotland and strikes every summer visitor to the Highlands with amazement. It perfectly suits the Scotch character, for the

flower has the strength of "Scots wha.hae with Wallace bled," while the foliage is as delicate and tender as "Annie Laurie." Even England is not cool and moist enough for the flame flower, so you can imagine with what pride the author of "Potpourri in a Surrey Garden" showed me this nasturtium on her own holly.

Possibly we might do something of the sort with ordinary nasturtiums on rhododendrons or mountain laurel, but I fear it would be very tame by comparison, and the seeds would of course have to be sown every year, as the plant is an annual, while the flame flower is perennial.

It would be folly to trust our precious rhododendrons and laurel to any strangling honeysuckles or other rampant vines. The ideal vine for the purpose should look fragile and be hardy. The only one I think of that answers all the requirements is *Clematis paniculata*. Even our own wild clematis is a bit untidy in fruit. I would rather use it on deciduous shrubs, as many do. The two species recommended by Mr. Robinson are *Clematis Viticella* and *alpina*, but whether they would do well here remains to be seen.

EFFECTS WE CANNOT HAVE — OUR JOB

The South and the Pacific coast can rival England in luxuriance and variety, but the North cannot. In New England ivy must be covered in winter or else grown on the ground. East of the Rockies we may never have climbing roses growing up to the third story of a house and producing large, double flowers all summer. (See plate 76.) The great wonder-working genus Clematis is only partially available to us. England can grow anything which the North can and a great deal more. That is not strictly true, but it is exasperatingly near the truth.

It will be three centuries, at least, before America as a whole

can be as beautiful as England. For, first, we must build our houses of permanent materials, next evolve a national style of architecture, and finally clothe our houses with the most appropriate vines.

Before we can grow the great variety of climbers that England does, we may have to build thousands of miles of high garden walls of brick and stone. But certainly we must plant Virginia creeper (plates 39 and 74) and Japan ivy by the million, especially in great cities, where no ugly wall should be left uncovered. And we must make every house beautiful the year round by growing on it evergreen climbers, especially ivy and euonvmus, which must be planted by the million.

But while the nation has long to wait, let no one be discouraged. The individual here can achieve during his own lifetime as much garden beauty as the individual in England. Americans are not deficient in originality and we may exercise that gift in devising different *ways of training climbers* — streamers, garlands, arches, wreaths, clouds, veils, bowers, arbours, pergolas, and covered ways. (See plate 75.) Moreover, the most progressive communities, in many cases, have been the ones that had the greatest natural difficulties to overcome.

It will be a long and hard job to find every plant that fits the climate of the Northern United States, but the longer our minds dwell upon questions of fitness the greater progress we shall make. And when at last we develop an American style of gardening, I believe the climbers will play an important part therein.*

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* For descriptions and culture of particular vines consult Bailey's "Cyclopedia of American Horticulture." Among the best mgazine articles are:

"The Decorative Value of Vines" by Frances Duncan, "Indoors and Out" 1909, pp. 78 to 83.

"How to Fit a Garden to a House" by Frances Duncan. *Ladies' Home Journal*, Feb. 1907, p. 24.

"The Best Climbers South and North," by P. J. Berckmans. *Garden Magazine*, Jan. 1909, pp. 273 to 275.

ENGLISH EFFECTS WITH HARDY PERENNIALS

CHAPTER XIX

ENGLISH EFFECTS WITH HARDY PERENNIALS

Making pictures with perennial flowers — Bold pictures on lawns — Delicate, misty, airy pictures — Moonlight pictures, wild garden and water side pictures — Pictures containing life.

THE most striking fact about perennial flowers in England is that the English people know and love *a far greater variety* of them than we do. One English catalogue offers 2,700 kinds of perennials. We once had an American catalogue that listed half as many, but whether more than one fifth of them were really available "I hae' me doots." The average English nurseryman seems to cultivate from five to ten times as many different species as the average American. This means that if you wish to see the latest improvements in irises, phlox, larkspurs, oriental poppies, etc., you will probably have to send to Europe. Only the commoner perennials are available in America. For new and rare plants we must still look to Europe.

The second difference is that the English have a deeper passion than we for *collecting*. Everywhere you find some one who grows fifty or more varieties of his favourite flower, *e. g.*, German or Japanese iris, or peony, or the florists' pentstemon. One English catalogue contains 346 varieties of phlox, 224 of border carnations, 180 of chrysanthemums, etc. — fully three times as many as you can get in America. Some amateurs whom I saw have the passion for completeness and stick to one flower throughout their lives;

others like to weed out the varieties they do not care for, concentrate on the best, and then take up another flower in the same way. Some use the knowledge gained by collecting to produce new varieties, others are content with the joys of possessing flowers that no one else has and of being appealed to as authorities. Still others abhor "florists' flowers" (*i.e.*, big genera), and go in for rare plants belonging to any genus under the sun, *e. g.*, Ostrowskia (plate 77). Every one has his favourite sport, but he has a favourite flower too. There is "good fun" in collecting perennial flowers and I expect to see Americans take it up with gusto. Have you ever collected fifty varieties of any hardy flower — say pinks or Japan iris or phlox or bellflowers, or sedum or veronicas or peonies?

The third great fact about perennials that struck me is that the English understand better than we *how to make beautiful pictures with perennials.* (See Solomon's seal, plate 77.) Cultivated people will discuss at the table the best colour schemes for borders, how to hide the deficiencies of hardy plants after they bloom, what flowers look well together, and the right and wrong way of using the latest novelty. The designing of garden pictures seems to me a higher pleasure than merely loving each flower separately for its own sake. At any rate I shall not try to describe all the new and wonderful plants I saw in England for, as old Gerarde might say, that would be like rolling Sisyphus his stone. I shall merely tell about a few artistic ways I saw of using hardy flowers, especially those that bloom between the first of June and middle of August.

PERENNIALS FOR SHOWY MASSES

The showiest border flowers that I saw in England were peonies in June and larkspurs in July. It is right to plan for the showiest features first, but the worst possible way to do it is to get

EXAMPLE OF RARE PERENNIALS THAT APPEAL TO COLLECTORS. OSTROWSKIA MAGNIFICA, THE LARGEST OF ALL BELLFLOWERS, AGAINST A BACKGROUND OF MAGNOLIA GRANDIFLORA. *See page 228*

EXAMPLES OF THE BOLD PICTURES THAT CAN BE MADE ON LAWNS BY USING ROBUST PERENNIALS WITH ATTRACTIVE FOLIAGE, E. G., THIS ELM-LEAVED SPIREA. *See page 233*

EXAMPLE OF PERENNIALS FOR PICTORIAL EFFECTS. SOLOMON'S SEAL IS A GREAT FAVOURITE IN ENGLAND, AND IS THOUGHT TO SUGGEST THE FLIGHT OF BIRDS. *See page 228*

a catalogue, select the flowers you love best, and arrange the plants after they come. The best way is to draw a diagram of the border to scale, dividing it into five-foot sections, so that you can locate every plant on paper. Next you make a list of the months and ask yourself, "What shall be my main reliance in June, in July, and so on?" Thus you decide on your big masses first and the "fillers" last — as any artist does. The most pictorial borders are designed in this way in England, and it is thought best to have only one mass of the dominant flower for each period, instead of repeating that flower in the same border.

Peonies are certainly the showiest border flowers in early June (or after the German iris) and double peonies are more massive than single ones. The best possible associates for peonies are lilies—not the madonna, but really permanent ones that bloom later — elegans, Henryi, and speciosum. By using these bulbs as fillers you hide the deficiencies of the peonies and get two crops of flowers in the same bed.

The peony and lily idea is now familiar in America, but I have never seen peonies used in America for wild gardening. At first the idea seems absurd, because double flowers cannot possibly look wild when viewed near by. But if you put peonies at the edge of a wood at so great a distance that you cannot distinguish form and can only enjoy their colour, they make a wonderful effect, especially in the early morning, at twilight, or when they light some dark corner. I should like to see this notion tried on some great estate in America. I believe the painters would like it. The horticultural justification for this idea is that peonies are about as long lived as shrubs.

After the peonies, the next showy flower is the perennial larkspur. It is certainly the queen of the border in July. The

most artistic way to use larkspurs is to place them where they will be seen in combination with strong vertical lines in architecture, *e. g.*, the columns of a pergola or summer house. Against rounded bushes they may not look so well. Most people mix all the different shades of blue and purple together. Mr. J. William Barr's idea is to have about six pale blue larkspurs in one group, six dark blue in another and six purple ones in a third. And he would choose varieties that come one after another instead of all together. Personally I cannot "go" the double larkspur, especially those with blue petals and purple centres.

The English have made a great exhibition flower of the larkspur, and lords and] ladies flock to see three-foot spikes of the variety called Monument, while individual flowers of the Duke of Connaught are said to attain two and a half inches in diameter (I measured one that was two inches across). These large flowered varieties, however, are not always the most effective in the garden. They need a rather open spike in order to show their individual flower to advantage. In the garden, the long, dense spikes of small flowers suit me best, because the soul of the larkspur seems to be *aspiration*, and this idea is most clearly suggested when the flowers approximate the spire in form and the sky in colour. The fashionable idea, however, is to make the larkspur a collector's flower. People often import fifty varieties at a time from England, but such collections often disappear in a few years because of the black spot — a disease unknown in England. The best way to control this disease it to propagate these improved varieties by cuttings.

PERENNIALS FOR ARCHITECTURAL EFFECT

A moment ago I spoke of the pleasant harmonies produced by larkspur when they repeat the vertical lines of porch or

pergola. Other flowers with long spikes are foxgloves, monkshoods, chimney bell-flowers (a great favourite in England), eremurus, *Verbascum phlomoides*, and the bugbane or cimicifuga. On a smaller scale are snapdragons, lupines, and veronicas. Hollyhocks make strong vertical lines with their stems and so do perennial sunflowers, the plume poppy, the madonna lily, and the giant reed or arundo.

Dome-like bushes often look well against public buildings crowned by domes. And if your house is characterized by horizontal lines, you may repeat those lines in flowers that have broad flat clusters, *e. g.*, sweet williams, achilleas, *Sedum spectabile*, and some varieties of phlox. Doubtless it could be better done with shrubs, especially viburnums. But I hope no one will let such ideas run away with him. The vertical lines are worth considering, but I would always have something that combines vertical lines with the power to soften architectural hardness, *e. g.*, the fluffy plumes of *Stenanthium robustum*, or the arching leaves of bamboos or reeds.

There is an architectural quality in the panicles of Rodgersia shown on plate 80, and the leaves might almost be called "monumental," for they are bronzy green, about a foot across and parted into five broad divisions. I think Mr. Fremlin has done well to bring perennials and grass right up to his doorstep, for he lives among the flowers in a garden like that of Mr. W. C. Egan at Highland Park, Ill. Ordinarily, however, a house needs some formal planting to make a transition between architecture and nature. And, while some of my readers may be captivated by the fine effect of this Rodgersia, they should remember that herbs die down in winter. The most appropriate plants for the immediate

environment of a house are broad-leaved evergreens, especially mountain laurel, rhododendrons, and English ivy. As this picture of Rodgersia will doubtless start many inquiries, I must say that the plant does well on the north side of a house, if protected from heavy winds, as it is a shade-lover. In England gardeners are careful to give it a peaty soil.

GRAY FOLIAGE IN PICTURES

I believe the English know better than we how to use plants with gray or silvery leaves, such as pinks, the rock-cress, gold-dust, the woolly chickweed, and lavender cotton. So great a variety is there that you may have gray-leaved plants with flowers of almost any colour or season of bloom you desire. I would not use many tall plants with gray leaves, because they are very conspicuous, like the high lights of a picture. Fortunately most of the gray-leaved perennials are dwarf and spreading so that they can be used rather freely for carpeting the ground between taller plants. We all know that white flowers are peace-makers in a border, but only the elect seem to understand that gray foliage has the same function. Our summers are so much hotter than those of England that we ought to use an abundance of white flowers and gray foliage. However, it is easy to overdo silvery masses, especially if you put them next to dark patches, where the contrast may be too strong. But gray is a softer colour and gray leaves often have a woolly texture.. Moreover, gray is a notable harmonizer of purple, magenta, and crimson-pink flowers, which cause perhaps nine tenths of the colour discords in ordinary gardens. Again, gray foliage has a remarkable effect upon blue flowers, enhancing their purity and lustre. For these reasons I

should use gray foliage chiefly to carpet the ground beneath blue flowers and those of the purple section.

BOLD PICTURES ON LAWNS

The English do not spoil their lawns as often as we do by scattering fine specimens over them. But they often feel the need of a formal bed of flowers near the edge of the lawn or near the house. (See the Anchusa on plate 77.) Under such circumstances Americans are likely to use tender plants when hardy ones would be more pictorial in flower and more attractive in foliage. A good example is the elm-leaved spirea shown on plate 77. If you will place your hand over the flowers you will see how attractive the foliage is when the plant is not in bloom. Many other long blooming perennials and plants with attractive foliage are mentioned in Chapter XXIV.

There is a right and wrong way of getting subtropical effects in a northern country. Tender plants never look acclimatized. Why not study the great tropical genera and find out the northernmost species of each? For example, if we want the bamboo feeling in our gardens why not use *Phyllostachys nigra*, *viridiglaucescens*, and other hardy bamboos, instead of fancy grasses that must be raised every year from seed? If we want pinnate foliage, there are the *Aralia cordata* and *Cachemirica*. The classical leaf form of the fig is mimicked by the bocconias, of which there are four hardy species. If gigantic leaves are desired, there are six hardy species of Rheum. And if brilliantly coloured foliage is needed, why not forget coleus for once in favour of the metallic blue Eryngium and Echinops?

DELICATE, MISTY, AIRY PICTURES

We are inclined to overdo what might be called the *masculine* element in our gardens. One can vulgarize a garden by having

too many plants with large flowers, such as hollyhocks, sunflowers, rose mallows, Japan irises, peonies, gaillardias, and Oriental poppies. In the same class belong plants with big clusters of bloom, such as phlox and chrysanthemums. A garden dominated by such robust and virile plants is in danger of becoming coarse. It needs the feminine refinement of delicately cut foliage and airy sprays of minute flowers, such as gypsophila or baby's breath. We could make our gardens a great deal cooler and more restful by always having one or two fluffy white masses of bloom which suggest sea foam, billows, fleecy clouds, and the like. For example, note the feathery plumes of the elm-leaved spirea on plate 77, the liquid beauty of the Rodgersia's tassels, the mistiness of the Heuchera (plates 80, 82) and the fleecy cloud made by the Crambe on plate 78.

In making such pictures the English have one great advantage over us in being able to carpet their borders with saxifrages, which are as exquisite as lace. They are also very fond of the Californian heucheras, which are practically unknown in the East. But there are many good plants of this same general character, *e. g.*, the feathered columbine (*Thalictrum aquilegifolium*), and the flowers known as herbaceous spireas, especially the florists' spirea (*Astilbe Japonica*), the fern-leaved and elm-leaved meadow sweets (*Ulmaria Filipendula* and *pentapetala*), the true and false goat's beard (*Aruncus sylvester* and *Astilbe decandra*), and the lovely plant known as *Spiræa astilboides*.

The planning of a border is a hard enough job without complicating it with considerations of "masculine and feminine," but it might be well to stroll out to your garden to see whether the two elements are well balanced. Perhaps your border needs some of the plants just named.

EVENING AND MOONLIGHT PICTURES

The finest time for enjoying a garden is at dusk, but our twilight is so much shorter than the English that there is usually nothing left of it after supper. Many Americans can hardly enjoy their gardens except on Sundays or in the evenings. Therefore our gardens ought to be charming by night as well as by day, and they can easily be made so if we have a fair proportion of white and fragrant flowers. The best classified lists of such flowers are given in *The Garden Magazine* for July, 1909, pages 332 and 333, and *Country Life in America* for May 1908, pages 42 to 45. I can only add a few notes made in English gardens.

Pale yellow flowers are visible by night and the snapdragons of this colour have a spectral effect. The English are also very fond of Lamarck's evening primrose (known to seedsmen as *Œnothera Lamarckiana*).

It is also pleasant to see dimly through the darkness white sheets of flowers carpeting the ground, and still pleasanter when a rush of fragrance is borne to you by the night wind. Sweet alyssum and sweet woodruff furnish these sensations. And at Surbiton I saw a species of woodruff not described in Bailey's Cyclopedia, *viz.*, *Asperula hirta*, which was notable for having the fragrance of almonds.

WILD GARDEN AND WATER-SIDE PICTURES

We have a very provincial idea of wild gardening in America. Most people suppose that it means the cultivation of American wild flowers. If you will examine William Robinson's delightful book on wild gardening you will see that the main idea is to grow the hardy plants of other countries so that they will look like wild

flowers. He invented this idea for the special benefit of plants that are beautiful when in bloom, but otherwise unfit for borders or showy gardens.

For example, we do not take our perennial asters seriously, but the English do. I know one English nurseryman who offers one hundred and thirty-seven kinds of American asters. We give little thought to improving our native wild flowers, but the English cultivate forty-five varieties of the New York aster alone (*Aster Novi-Belgii*). Some robust kinds multiply too fast for a border, but the finer sorts are often grown in famous show gardens. What American would ever take the trouble to stake asters? If we do we are likely to make them tight and bunchy. The English will sometimes use branches carefully cut in such a way as to be entirely invisible and yet hold out these great sprays of cloudy bloom in more than native airiness and elegance. One lady had two borders set apart for "Michaelmas daisies," as the English call them — one for asters of the finest colours and another for the strong purples and other colours that ordinarily clash. The latter she harmonized by using plenty of white asters.

The English do not despise plants with coarse or weedy foliage, provided they have the pictorial quality. With us mulleins are a by-word and a jest. But the English cultivate fully twenty species of them. The great golden candelabra of the Grecian mullein (*V. Olympicum*), borne on plants six to ten feet high, make a stirring spectacle. Many mulleins have noble rosettes of huge silvery leaves. And breeders have improved the old purple mullein (*V. phœniceum*) until it now has a fairly good pink in addition to violet, lilac, rose, white, and copper colour.

How little imagination we exercise toward plants whose chief fault is that they are easy to grow! For example, many Americans

EXAMPLE OF CLOUDY AND BILLOWY EFFECTS WHICH THE ENGLISH GET WITH WHITE-FLOWERED PERENNIALS, ESPECIALLY WHEN THE WIND STIRS. CRAMBRE ORIENTALIS, A RELATIVE OF THE SEAKALE WHICH GROWS FIVE TO SEVEN FEET HIGH. *See page 234*

EXAMPLE OF LARGE-BLOOMING PERENNIALS USED FOR BEDDING. THE DROPMORE ANCHUSA, ONE OF THE BEST BLUE FLOWERS IN CULTIVATION. *See pages 233, 327*

have discarded *Polygonum Sachalinense* because it multiplies too fast. An English gardener told me that, if you will pull the suckers, hardly any will be formed after the third year. And if you confine the plant to three stems and feed heavily it will make an extra tall and thick bush, and arch so gracefully that you may use it as a specimen plant on the lawn. Could we not make some extraordinary pictures by applying this principle to the perennial sunflowers and the plume poppies or bocconias? Other tall plants of rough or coarse habit that make very striking pictures in English wild gardens are the giant silver thistles (Onopordon and the like), the compass plants or silphiums, and the metallic blue globe thistles and sea hollies.

I often saw great clumps of moon daisy (*Chrysanthemum uliginosum*) reflected in the water. This plant never attains magnificent proportions in a border unless it is given an extra supply of water. A big colony by the waterside holding up thousands of great white daisies at a height of six feet is a vision of beauty.

The greatest of all waterside effects in England is the titanic foliage of Gunnera, the leaves attaining a maximum breadth of eleven feet. This is not hardy with us. The biggest leaf we can have is that of *Rheum Collinianum*.

Of all the tall perennials I saw by the waterside in England, the most refined, it seemed to me, was *Polygonum Sieboldii* or *cuspidatum*.

PICTURES CONTAINING LIFE

The brooding peace of secluded English gardens is made sweeter by the presence of white doves. The magnificence of others is enhanced by the presence of peacocks. We ought to attract song birds to the garden by providing a drinking and bathing place for them. I cannot even hint at other ways of bringing

life into the garden because my subject is perennial flowers. But we can use some of these to lure interesting creatures. In the "American Flower Garden" Neltje Blanchan gives a list of red flowers with long tubes that will attract the humming bird. It includes bee balm, wild red columbine, cardinal flower, and Coquelicot phlox.

Very much like humming birds are the hawk moths, which fly at dusk and are sometimes called humming bird moths. These you can attract by having plenty of fragrant white flowers with long tubes. I have seen a dozen of these gorgeous creatures hovering over masses of the phlox called Miss Lingard. Nicotianas and honeysuckles will draw the largest and showiest moths, such as the Luna, Cecropia, Cynthia, and Imperial.

However, moths are night fliers and therefore not so important as the butterflies, which animate a garden by day. Among the largest and most gorgeous of these are the swallowtails, which visit a great variety of flowers. Violets attract the butterflies known as fritillaries. Snapdragons attract the nymph which the entomologists call the "buckeye." The enthusiast who desires further suggestions along this line may glean them from Comstock's "How to Know the Butterflies." There is one plant worth having in every garden because it is habitually covered with more butterflies at a time than any other I know. This is the blazing star or the Kansas gay feather (*Liatris Pycnostachya*).

Lafcadio Hearn has a delightful study of the musical insects of Japan, which are raised and sold in cages. More practical for us is Mrs. Comstock's chapter on "Pipers and Minnesingers" in "Ways of the Six-footed." The finest singers among the insects are the bees. The quaint old beehives in English gardens are not only picturesque but furnish a mellow and soothing hum. Bees

are popularly supposed to have an affinity for blue flowers, and the labiate type of flower is certainly adapted to them. Nearly every garden contains some labiates, or members of the mint family, *e. g.*, thyme, lavender, bugle, bee-balm, or obedient plant. There are plenty of other plants in every garden to attract bees, but if you do not know *Salvia pratensis*, I wish you would try it. For then you will be sure of a good humming all day long and it is a brave sight to watch the stamens suddenly spring forth from their places of concealment and rub the backs of the bees with their golden pollen!

I like to close each of these chapters with a list of the best books that may help a student further, but in this case I am at a loss.* I doubt if there will ever be a good book on hardy borders and hardy perennial flowers. For nature is more wonderful than any account of it, and the full beauty of gardens can never be gotten into books. If you wish to make your garden more pictorial go to the nurseries and see plants. Then go to gardens where they are artistically combined. The best thing we can do is to forget theories and study beauty.

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* W. T. Macoun's "List of Herbaceous Perennials," tested at Ottawa, is valuable as to hardiness and relative merit of species. It is a document of 112 pages. For full descriptions of particular species consult Bailey's "Cyclopedia of American Horticulture."

ENGLISH EFFECTS WITH ALPINE FLOWERS

CHAPTER XX

ENGLISH EFFECTS WITH ALPINE FLOWERS

Rock gardening a universal passion in England and may become so here — Most of the showiest flowers easy to grow even with no rocks

ROCK gardening is a universal passion in England, and no wonder, for the alpine flowers are the real "gems" of the floral world. They are as small as jewels and have the same purity of colour, and in spite of their diminutive size they are showy, because they have a genius for spreading so as to form great sheets of bloom.

For thirteen years I had been dreaming of English rock gardens and reading articles about them in English papers, yet I was totally unprepared for the immense number of them and the radiant visions of beauty which they present. I had seen nearly all the important rock gardens in America, and knew there were only two notable ones outside of botanical gardens. So I supposed that rock gardening was merely a hobby for a few skilled amateurs and collectors. On the contrary, it seemed as if every one had a rock garden, and the mass effects, while they last, are brilliant beyond anything we know or can imagine.

At first I touched the stars, as every one does who sees a collection of alpines for the first time. The ground is carpeted with jewels, such as Ali Baba never saw. Speech seems a poor thing. You are far above mere names of plants and botany. You wander about, half seeing new forms and drinking great draughts of

ambrosial colour until the mind can hold no more, and you put your hands over your eyes to shut out the splendour of this new wonder-world.

Soon comes a sorrowful reaction. Every one says: "You Americans can never reproduce these effects on a large scale. Your summers are too hot and dry. It is the cool, moist summer of England that suits these mountain flowers to perfection."

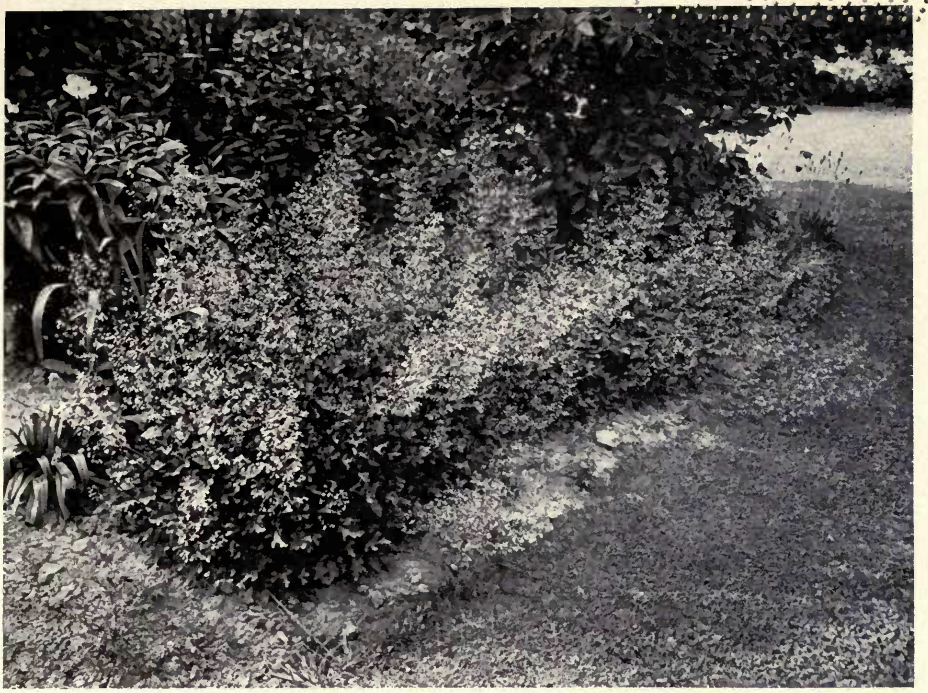
I felt, as thousands of Americans before me have felt, that rock gardening was an impossible proposition for us, and I tried to renounce all this beauty, for I was on a practical mission. But each new rock garden caused a fresh pang and fresh dejection until I was ready to quit England in despair.

One day at Kew I noticed how many of the most beautiful flowers in that famous rocky dell were *native to America* and the thought came, "If England can grow and love our mountain flowers, why cannot we?" Then I began to ask every gardener, "Which flowers can stand the *hottest sunshine on the barest rocks?*" and found a goodly number of them. These two classes of plants alone seemed to me enough to justify an American style of rock gardening.

But the biggest fact of all never came to me until I got back home and had a chance to study our own books and catalogues. *Most of the showiest rock-loving flowers are so easy to cultivate that any one can grow them in an ordinary border without any rocks at all!* And practically all the difficult kinds which English enthusiasts grow any American can enjoy if he will go to the expense of a really first-class rockery.

So I say boldly the old pessimistic attitude is dead wrong! Rock gardening will become a great institution here. Our hot, dry summer will not prevent rock gardening, but will give it a

79. A BIT OF SIR FRANK CRISP'S FAMOUS ALPINE GARDEN AT HENLEY, MODELLED AFTER THE MATTERHORN. IT COVERS ABOUT THREE ACRES, 7,000 TONS OF ROCKS WERE USED, AND ABOUT 1,000 SPECIES ARE GROWN. IT IS SAID TO BE THE LARGEST PRIVATE ROCK GARDEN IN THE WORLD. *See page 65*



EXAMPLE OF THE MANY MISTY, AIRY, LACE-LIKE EFFECTS WHICH THE ENGLISH GET BY USING VARIOUS SPIREAS, MEADOW RUES, ETC. *See page 234.* THESE ARE HEUCHERAS, NATIVES OF AMERICA

EXAMPLE OF PERENNIALS FOR ARCHITECTURAL EFFECT, THE SPIKES OF THIS RODGERSIA REPEATING THE VERTICAL LINES OF THE HOUSE. MR. FREMLIN'S, WATERINGBURY, KENT. *See page 231*

THE LARGE-FLOWERED CATNIP (*Nepeta Mussini*) HAS PURPLE FLOWERS IN RACEMES SIX OR EIGHT INCHES LONG. IT BLOOMS STEADILY FOR THREE MONTHS

THE EDGING IS OF WHITE THRIFT (ARMERIA). ABOVE IS A HARDY GERANIUM. THE EVERGREEN PLANT IS A DWARF SPRUCE

THE PLANTAIN-LEAVED THRIFT (*Armeria plantaginea*) HAS BALLS OF PINK FLOWERS AND LONG, PICTURESQUE STEMS. THE SEDUM IS A NEW SPECIES FROM JAPAN, WITH LARGE YELLOW FLOWERS, RED STEMS AND GRAY LEAVES BORNE IN ROSETTES. ALL THE PICTURES ON THIS PAGE ARE FROM SIR FRANK CRISP'S GARDEN. *See page 65*

beautiful new American character. I am confident of it for two reasons. We have the spirit and we have the plants. We all want the best there is, and certainly there are no flowers more beautiful than alpines.

England herself used to be equally pessimistic about her own ability to grow alpines, and her wonderful enthusiasm of to-day has come within the memory of the present generation. English authorities used to say that alpine flowers cannot be grown in the lowlands. Certainly the climate of England is quite unlike that of the Alps. In Switzerland the flowers are protected from alternate freezing and thawing by the snow; in England they are not. Yet there are few alpine flowers worth having that are not now grown in England.

We, too, are handicapped by changeable winters and hot summers, but we can find plenty of charming alpines that will stand both. For instance, here are some flowers that grow wild on the Alps but are so common in gardens that we never think of them as alpine plants — the snowdrop, daffodil, poet's narcissus, trailing myrtle, Christmas rose, lily-of-the-valley, Scotch pinks, common columbine, and English daisy. You may think that these are *too gardenesque for alpine effects*, and I heartily agree that improved pinks, columbines, and daisies would not be appropriate. It would be impure design to use big masses of them on rocks. But the wild forms of these plants are as dainty as any other alpine flowers, and it is easy to get the seed of any wild forms from Geneva, Switzerland.

This reminds me that the cheapest and *easiest way to start a collection of alpine flowers* is to import the seed from Europe, because flower seeds can now be mailed with slight duty. There are no American catalogues of alpine plants, but there are

many in England. There is a Swiss catalogue that offers two thousand five hundred different kinds of seeds; and a German that lists about three thousand four hundred. This illustrates the immense range there is for individual taste and experiment.

However, beginners are appalled by such big lists, and most Americans want to know where they can buy plants, because they are generally in a hurry and do not mind the extra expense if they can get results the first year. Unfortunately, there is no way of buying alpine seeds or plants in America, at the present time, except by picking out the alpine species from general catalogues. As beginners do not know which plants are alpines, I shall be forced, at the risk of seeming unduly technical, to give lists of alpine plants and indicate how they can be secured. But you would find it much pleasanter to buy a good book, like Hulme's "Familiar Swiss Flowers," decide from the coloured plates what you want, and then send your list to one of the specialists in hardy perennials for an estimate, because they often have many species which they do not catalogue.

THE TALLER ALPINE FLOWERS

Let us begin with the *flowers that actually grow in the Alps*, not because they are any better than those of our own White Mountains but because they are more famous and easier to get. Doubtless you know most of these already, and think of them only as border plants, for they will grow in lowlands without rocks, and you can buy the plants from any one of a dozen American nurserymen. In rich soil they may grow two to four feet high, but in the rockery they will be smaller and correspondingly prettier. For even coarse weeds become refined and look like wild flowers when grown

in thin, poor soil, and on rocks. However, you will see that there is nothing coarse in the following list:

Common Names	*Scientific Names*	*Colours*	*Season*
Columbine	*Aquilegia vulgaris*	violet	Apr.-June
St. Bernard's lily	*Anthericum Liliastrum*	white	Apr.-July
Feathered columbine	*Thalictrum aquilegifolium*	rosy	June
Bush clematis	*Clematis recta*	white	June
Pale yellow wolfsbane	*Aconitum Lycoctonum*	yellow	June-Sept.
Yellow foxglove	*Digitalis ambigua*	yellow	June-July
Jacob's ladder	*Polemonium cæruleum*	blue	June-July
Spiked speedwell	*Veronica spicata*	blue	July-Aug.
Swallow-wort gentian	*Gentiana asclepiadea*	blue	July-Aug.
Bee larkspur	*Delphinium elatum*	blue	June-July
Meadow sage	*Salvia pratensis*	blue	June-Aug.
Clustered bellflower	*Campanula glomerata*	blue	July-Aug.

DWARF ALPINES ANY ONE CAN GROW

But the peculiar charm of a rock garden is not in plants that are two feet high or more. It is in the plants that grow *only a few inches high*, for it is a never-ending delight to see them spread out until they carpet a space three to ten feet square. Do not forget that all the plants in the next list *really grow on the Alps, and have the true alpine charm:* yet you can order the plants from any American nurseryman, either in spring or fall. As a rule, it is not safe to set out newly bought alpine plants in autumn, but you need not be afraid of these:

Common Names	*Scientific Names*	*Colours*	*Season*
Hepatica	*Hepatica triloba*	white, purple, pink, blue	March
Spring Adonis	*Adonis vernalis*	yellow	April
Wood anemone	*Anemone nemorosa*	white	April
Yellow fumitory	*Corydalis lutea*	yellow	Apr.-Oct.
Lungwort	*Pulmonaria officinalis*	blue	April
Pyramidal saxifrage	*Saxifraga Cotledon*	white	Apr.-May
Geneva bugle	*Ajuga Genevensis*	blue	May
Common bugle	*Ajuga reptans*	purple	May
Snowdrop windflower	*Anemone sylvestris*	white	May-July
Fringed pink	*Dianthus superbus*	lilac	May-June
Marsh gentian	*Gentiana Pnemonanthe*	blue	May-July
Cushion pink	*Silene acaulis*	pink	May-Aug.

Common Names	*Scientific Names*	*Colours*	*Season*
Mountain speedwell	*Veronica montana*	blue	May-June
Woolly yarrow	*Achillea tomentosa*	yellow	June
Alpine aster	*Aster alpinus*	purple	June
Cheddar pink	*Dianthus cæsius*	rose	June
Harebell	*Campanula rotundifolia*	blue	June-Aug.
Maiden pink	*Dianthus deltoides*	pink, white	June
Yellow gentian	*Gentiana lutea*	yellow	June-July
Bird's foot trefoil	*Lotus corniculatus*	yellow	June-Aug.
Wall pepper	*Sedum acre*	yellow	June-Aug.
Coat flower	*Tunica Saxifraga*	pink	June-Aug.
Alpine soapwort	*Saponaria ocymoides*	crimson	July-Aug.
White stonecrop	*Sedum album*	white	July
Cobweb houseleek	*Sempervivum arachnoideum*	red	July

ALPINES THAT ARE HARD TO GROW

The way to grow all the difficult alpines is to have a first-class *rockery*, but I estimate that only 5 or 10 per cent. of the really desirable rock-loving flowers require such treatment. Among these are the edelweiss, the alpine poppy, the pasque flower, the gentians, the saxifrages, the cyclamen, the evergreen daphne with its divine odour, and the wonderful soldanella which is said to force its way right up through a solid block of ice. These world-famous flowers are so celebrated for their exquisite beauty that it is only natural that we should bewail our inability to grow them in an ordinary garden, whereas the big, cheerful fact is that any one can grow 90 per cent. of the showiest rock plants without the expense of a rockery. Even in England they do not expect to grow the plants just named without rocks, and therefore we should rejoice that we too can grow these treasures in a good rockery.

GARDEN EFFECTS WE CAN'T HAVE

As nearly as I can judge, the English get their great and glorious mass effects from only six or seven groups of rock plants. I think they depend chiefly on the saxifrages for white and for lace-

like effects; on the rock roses, or helianthemums, for a wide range of colour; on the sun roses or cistuses for large individual blooms; on gentians for blues; on primroses for yellows and crimsons; on the purple rock-cress, or aubrietia, for big carpets of bloom cheaply raised from seed; and on the pinks for fragrance.

All of these we can grow on a good rockery, but I believe it is folly for us to try to get great landscape or garden effects with any of these plants, save pinks. I am confident that we shall get equally gorgeous effects, but with a different set of plants. And I know we have done wrong in making a big fuss about the few plants which we cannot grow as well as England, instead of trying to see how we can get just as big effects that shall be distinctly American.

BIG EFFECTS WE CAN HAVE

One way in which we can get immense carpets of flowers in ordinary gardens without rocks, as well as on great estates that have plenty of rocky land, is to *concentrate on rock plants that are very easily raised from seed.* Here is a list that we can get from our own seedsmen, and these kinds are so easy to grow that most of them will bloom the first year, if started in a frame in March. Practically all can be had cheaply by the ounce and I hope that some of our readers will give them a thorough trial now for next season's bloom.

Those marked * are the only ones that actually grow upon the Alps, so far as I know, but in the rest of this article I shall pay no attention to such distinctions, because the Alps do not have a monopoly of floral beauty by any means. Indeed, the whole spirit of alpine gardening is cosmopolitan. The rockery is a beautiful device that enables us to grow plants from Arctic and Antarctic lowlands, from the highest mountains of the tropics and from our

own Appalachian and Rocky Mountains. And the word "alpine" is now so thoroughly generalized that people no longer begin it with a capital, and if you wish to refer specifically to European conditions you must say "the Alps."

Common Names	*Scientific Names*	*Colours*	*Season*
Goldentuft	*Alyssum saxatile*	yellow	April–May
White rock-cress	*Arabis albida*	white	April–June
Sweet woodruff	*Asperula odorata*	white	May–July
Snow in summer	*Cerastium tomentosum*	white	May–July
Garden pinks	*Dianthus plumarius*	pink, purple, white	May–July
*Alpine forget-me-not	*Myosotis alpestris*	blue	Summer
*Kenilworth ivy	*Linaria Cymbalaria*	violet	All season
*Alpine soapwort	*Saponaria ocymoides*	red-pink	All season
	Sedum Maximowiczii	yellow	July-Aug.
Veronicas		mixed, blue	Spring to Fall

In fact, the only useful distinction that can be made among alpine plants is between those that are easy to grow and those that are hard to grow. By "hard" I mean those that have to be grown in a rockery, and are, therefore, only for the few who have money and enthusiasm. By "easy" I mean those that any one can grow in ordinary garden soil without rocks, or with such modest rock work as any one can afford.

I have already given the names of forty-six European rock plants which will give us glorious mass effects in any garden, and which are commonly kept in stock by American nurserymen. I could easily extend the list to a hundred real English effects that we can transport bodily. But that is of little importance. The great fact is that *many of the rock plants most treasured in England are really native to America, and therefore are adapted to our climate beyond the shadow of a doubt.*

No one, so far as I know, has pointed out to what extent English rock gardens are indebted to America and I shall therefore devote the rest of this article to American wild flowers; for no

matter how many foreign alpines may feel at home here, it is obvious that we can never develop an American style unless we use some of our own wild flowers on a great scale.

FAMOUS AMERICAN ROCK PLANTS

Strictly speaking, the moss pink (*Phlox subulata*) is about the only American rock plant I know which is commonly cultivated the world over, even in its own country, which is the supreme test. But, here again, it is folly to draw any sharp line between plants that grow wild only on rocks and those which also grow in other situations. For instance, bloodroot will grow anywhere, yet it attains its highest beauty, I think, on rocks. The English think so, too, and spend no end of money to establish it in their rock gardens; but it is a hard plant to export, and we can always surpass England on mass effects with bloodroot.

As near as I can tell the most famous rock-loving perennials that are native to America, and reasonably common even in our gardens, are the following:

Common Names	*Scientific Names*	*Colours*	*Season*
Bloodroot	*Sanguinaria Canadensis*	white	April
Crested dwarf iris	*Iris cristata*	blue	April
Wild pink	*Silene Pennsylvanica*	rose	Apr.–May
Purple poppy mallow	*Callirhoë involucrata*	purple	Apr.–Aug.
Moss pink	*Phlox subulata*	crimson pink	May
*Yellow columbine	*Aquilegia chrysantha*	yellow	May–Aug.
Wild bleeding heart	*Dicentra eximia*	deep rose	May–Sept.
*Fire pink	*Silene Virginica*	crimson	May–Sept.
Coral bells	*Heuchera sanguinea*	red	June–Sept.
*Mist flower	*Conoclinium cœlestinum*	bluish	Sept.–Oct.

Those marked * are the only ones that grow more than a foot high. I must confess that it is not a very strong list from which to pick the big American winners, for the rose, pink, and crimson kinds are not of the most popular shades, especially in the case of the two greatest geniuses in the list. Moss pink, in its wild

state, has a crude and violent colour, and our rich estate owners have already made the mistake of painting whole hillsides with it, when they could just as well have used white, lavender, and other refined varieties of it. So, too, the wild bleeding heart is a never-ending marvel, because of its exquisite foliage and profuse bloom from May to September; but every time you look at its colour you sigh and turn away.

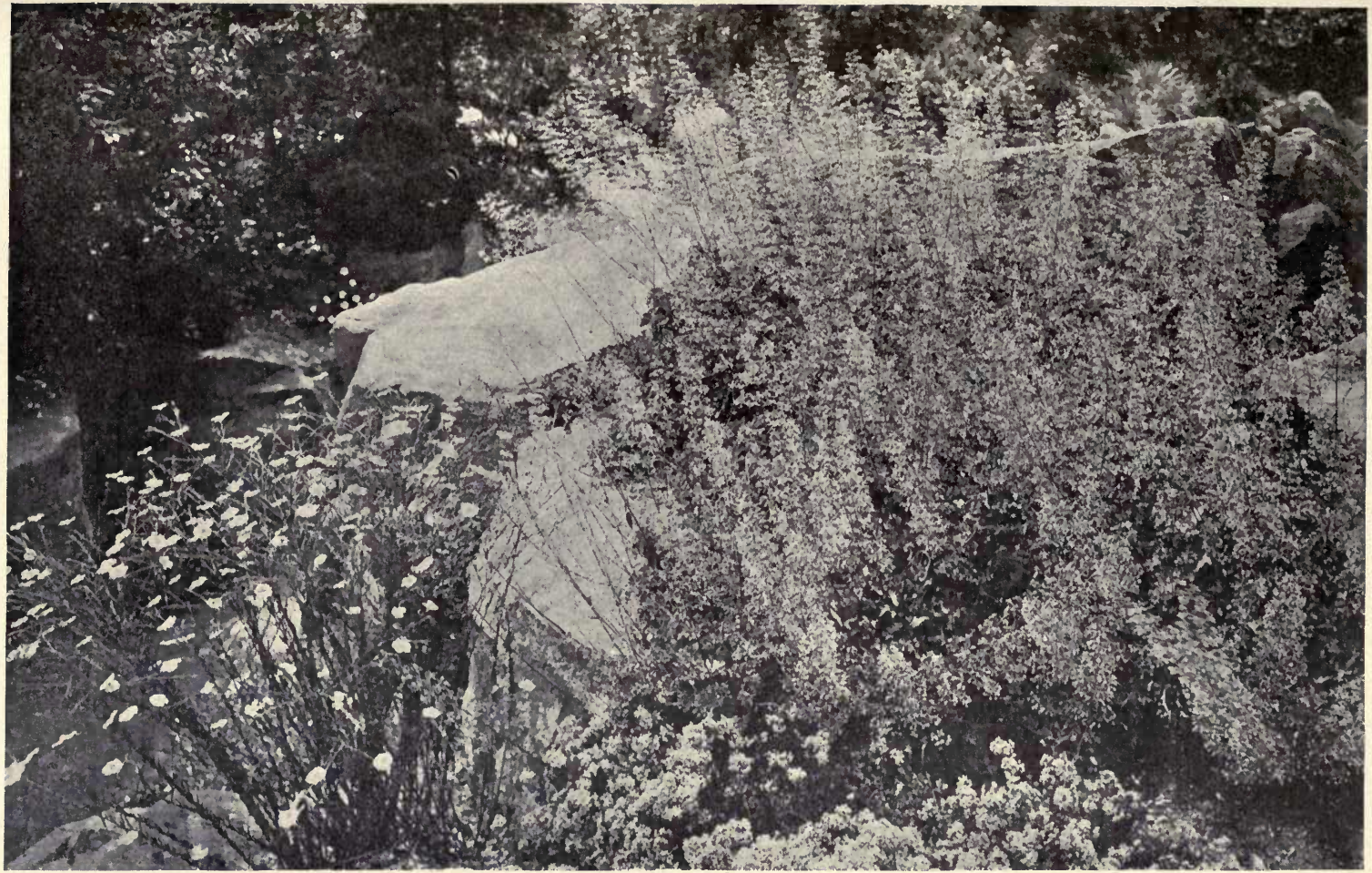
However, we need not be discouraged about the American element in rock gardening for many reasons.

AMERICAN EFFECTS IN THE ROCKERY

In the first place, we have at least a hundred *wild flowers that we may have to grow on rockeries* which are among the world's great treasures. Here again, the flowers are not always native to rocks, yet in every case there is some reason why we cannot expect large, permanent results from them in ordinary garden conditions. Most of them you can grow in woods, if you are fortunate enough to own any; but how many of us do? A thousand can afford a rockery for one who can have a bit of woods.

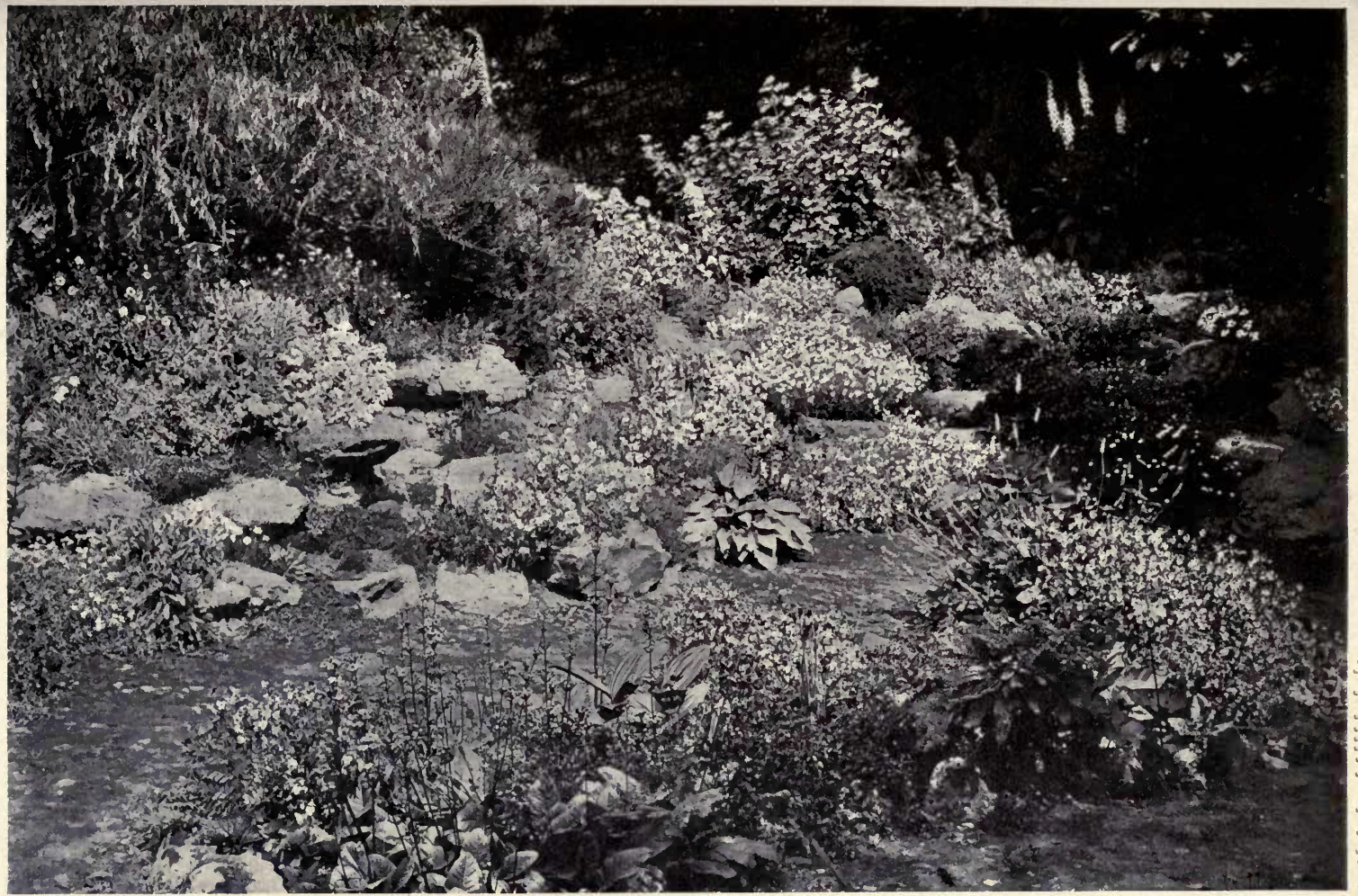
Common Names	*Scientific Names*	*Colours*	*Season*
Pyxie	*Pyxidanthera barbulata*	pinkish white	Mar.–May
Shooting Star	*Dodecatheon Meadia*	pink	Apr.–May
Wild red columbine	*Aquilegia Canadensis*	red	Apr.–May
Virginia bluebells	*Mertensia Virginica*	blue	May
Shortia	*Shortia galacifolia*	white	May
Indian pink	*Spigelia Marilandica*	scarlet	May–July
Lance-leaved sabbatia	*Sabbatia lanceolata*	white	May–Sept.
Bunchberry	*Cornus Canadensis*	white	June
Twin flower	*Linnæa borealis*	pink	June–Aug.
Cardinal flower	*Lobelia cardinalis*	scarlet	Aug.
Butterfly weed	*Asclepias tuberosa*	orange	Aug.
Fringed gentian	*Gentiana crinita*	blue	Sept.

This is certainly a superb list — enough to inspire any one to build a rockery where these treasures may flourish for years.



82 THE MIST AT THE RIGHT IS PRODUCED BY THOUSANDS OF LITTLE WHITE FLOWERS OF HEUCHERA MICRANTHA, AN AMERICAN FLOWER. YELLOW FLAX AT THE LEFT. FOR ANOTHER HEUCHERA SEE PLATE 80

83 THE WRONG WAY TO MAKE AN ALPINE GARDEN IS TO USE MANY LARGE ROCKS, LEAVE TOO MUCH OF THEM ABOVE GROUND, AND EXPOSE FRESHLY BROKEN SURFACES INSTEAD OF WEATHERED AND MOSSY ONES



84 A TYPICAL ENGLISH ROCK GARDEN, SHOWING A GREAT VARIETY OF ALPINE FLOWERS. NOTE ALSO THE FOXGLOVES AT THE UPPER RIGHT-HAND CORNER OF THE PICTURE. MR. FREMLIN, WATERINGBURY, KENT. *See page 66*

And please remember that there is no longer any excuse for robbing nature of these lovely plants. Every one of them can now be secured from nurseries or in the form of seed.

SUMMER EFFECTS ANY ONE CAN HAVE

But to come back to big displays with rock plants that any one can have, I believe that we shall make a great and peculiarly American success by emphasizing summer effects. In England, the rock garden is a spring garden. True, there are lovely bits of colour in it all summer and autumn, but the whole thing is a blaze of colour only in spring. In America, summer is the national play time. Our great annual exodus to the country does not come until hot weather, or say June; and our great vacation month is August. What we seek then is coolness, comfort, rest.

Now the coolest colours are white, green, gray, and blue. The hottest are red, orange, and purple. So I think we should avoid big masses of scarlet sage, red cannas, cerise geraniums, and other things that make us feel the heat, and plan to have broad sheets of dainty little white flowers like snow in summer, white tufted pansies, fragrant pinks, sweet woodruff, white rock-cress, and the common alyssum, which, though annual, sows its own seed.

The question of greenery on the rocks in summer is highly important and peculiar. The great fault of rockeries everywhere is that they show more rocks than vegetation, and that is why they look hard and hot in summer. But if there is too much vegetation the rockery will look coarse and weedy. Every thing in the rock garden must be daintier than in any other kind of gardening. We want no tall bushes or perennials, because we do not wish luxuriance of *height*, but of *spread*. So I believe we shall

get an important American element in our rock gardens by using American ferns that have a talent for spreading among rocks and give a feeling of coolness in hot weather.

DELICATE FERN EFFECTS

Oi course, ferns thrive best in shade, and genuine alpine flowers do not. But we must do the best we can. Some of us cannot afford elaborate watering devices and, therefore, the only way to keep rocks cool is to shade them. So we must make a special study of flowers that demand partial shade, and have the alpine charm. We must select ferns that have interesting leaf forms and spreading growth, instead of the tall, coarse ferns of commonplace form.

There are fifty-two kinds of native ferns that can be bought from nurserymen, but the following seem to me most appropriate because they answer the above requirements, and are a foot or less in height:

Common Names	*Scientific Names*
Common polypody	*Polypodium vulgare*
Hairy lip fern	*Cheilanthes lanosa*
Maidenhair spleenwort	*Asplenium Trichomanes*
Walking fern	*Camptosorus rhizophyllus*
Purple-stemmed cliff brake	*Pellæa atropurpurea*
Moonwort	*Botrychium Lunaria*
Hart's tongue fern	*Scolopendrium vulgare*
Broad beech fern	*Phegopteris hexagonoptera*
Adder's tongue	*Ophioglossum vulgatum*
Bulblet fern	*Cystopteris bulbifera*
Brittle fern	*Cystopteris fragilis*
Long beech fern	*Phegopteris polypodioides*
Oak fern	*Phegopteris Dryopteris*
Rusty woodsia	*Woodsia Ilvensis*

The club mosses and selaginellas are also interesting and refreshing and nearly a dozen kinds can be had now through specialists in native plants.

I would not make a fetich of having rock plants that are less than a foot high. I would have the maidenhair for its open, airy grace, the gossamer fern for its hay-scented foliage and the Christmas fern because it is attractive as late as Christmas.

FLOWERS FOR SHADY ROCKS

I said that we must make a special study of wild flowers that not merely endure shade but actually need shade and which nevertheless have the alpine charm. Our woods furnish many such, but they are mostly April and May bloomers. I will mention only a few of them, but every one is of exceptional interest in leaf or habit, particularly the Solomon's seal, of which the English are very fond.

Common Names	*Scientific Names*	*Colours*	*Season*
Hepatica	*Hepatica triloba*	purple, blue, pink, white	March
Dutchman's breeches	*Dicentra Cucullaria*	white, yellow	April
Dwarf early flag	*Iris verna*	blue	April
Solomon's seal	*Polygonatum biflorum*	greenish	April–May
Alum root	*Heuchera Americana*	white	May–June
Violet wood sorrel	*Oxalis violacea*	rose-purple	May–June
Wild blue phlox	*Phlox divaricata*	blue	May
False lily-of-the-valley	*Maianthemum Canadense*	white	May
Wild spikenard	*Smilacina racemosa*	white	May–June
Wood sorrel	*Oxalis Acetosella*	white	June

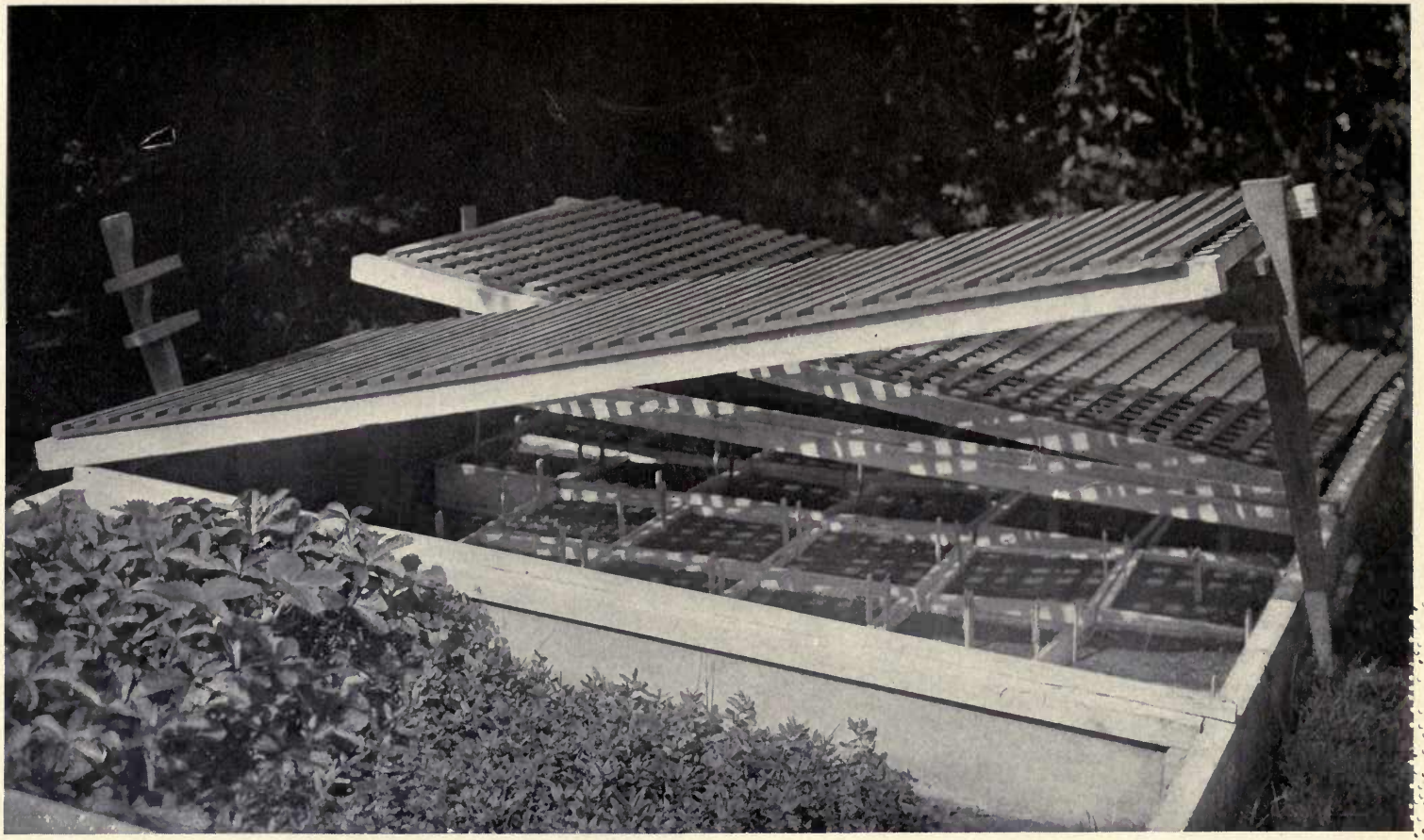
WHY NOT HAVE A ROCKERY?

Rock gardening will probably always be costlier here than in England. True, Englishmen may have to pay as much for rocks as we, but skilled labour costs more here and we must take artificial means to cool the atmosphere. A first-class rockery is a complicated structure because it must provide every kind of exposure, many kinds of soil, a perfect water supply, and perfect drainage. But a good one is worth all it costs.

The great drawback to the rockery is the difficulty of cooling the rocks and atmosphere. The obvious way is to shade the rock garden by means of overhanging trees. Unfortunately, shade is fatal to the finest alpine flowers. Our only hope, I believe, is to use water freely. This is costly, I admit, but there is no use in doing things by halves. We must have plenty of water anyhow, for seven tenths of the art of rock gardening is to give the plants a never-failing supply of moving — not stationary — water. There is an immense amount of talk in English books and papers about lime-lovers and lime-haters, but if we can only get a perfect water supply I believe we can cut out nearly all that pottering with special soils. Witness the best alpine garden in America (Mrs. Higginson's at Manchester, Mass.) where the gardener told me he never put a bit of lime into any compost.

An idea got at the Cambridge Botanical Garden filled me with great hope. The scholarly and ingenious curator, Mr. R. Irwin Lynch, was making a rockery in which the central feature was a well. The paths all lead naturally to this moist, cool spot where a person can get a drink of fresh, cold water and admire the flowers on all sides and above him. The rocks, soil, and air are all pleasantly cool and moist — not damp or sour. The moisture is expected to rise by capillarity through all the stones to the very top, without interfering at all with the quicker downward drainage through the soil.

Mr. William Robinson frowns upon connecting water features with rock gardening and I must confess that most of the lakelets, cascades, etc., which I saw in England in connection with rock gardens were unpleasing or even ludicrous. Yet Mr. Lynch's idea seems adapted to our life in three ways. It has the practical advantage of quenching thirst. It has the cultural advantage of



IT IS ASTONISHING HOW MANY THOUSAND ALPINE PLANTS CAN BE GROWN FROM SEED. THIS OUTFIT OF COLDFRAMES SUPPLIES THE LARGEST PRIVATE ALPINE GARDEN IN AMERICA — MRS. HIGGINSON'S. *See page 257*

86 DAFFODILS NATURALIZED IN AN ENGLISH PARK. THEY ARE AS LONG LIVED AS TREES AND HAVE BEEN KNOWN TO BLOOM EVERY SPRING FOR 100 YEARS WITHOUT CARE. YOU CAN HAVE 1,000 OF THEM IN YOUR MEADOW OR SHRUBBERY FOR $5 TO $15. *See page 261*

THE ARTISTIC WAY TO PLANT DAFFODILS IS TO HAVE SOME LARGE GROUPS, WITH SMALL COLONIES IN THE DIRECTION OF THE PREVAILING WIND, AS IF THE SEED HAD BEEN BORNE THITHER BY THE BREEZE. THIS MAKES THEM LOOK LIKE WILD FLOWERS. *See page 264*

keeping the rocks cool instead of hot. It has the æsthetic advantage of supplying a dramatic conclusion to the whole effort. A well at the lowest point seems natural, and since the highest walls surround it, there is sure to be grateful shade in the heat of the day — a point we Americans appreciate. The heated period of the English day is only three hours or so; with us it is nearer eight.

A good time to start a rock garden is in June when the spring rush is over and one can attend leisurely to the sowing of seeds. It would bankrupt most of us to buy plants of every alpine species we desire and beside alpines, as a class, do not transplant well from nursery to garden. The favourite plan is to sow seeds in flats in a coldframe any time from June to August, carry the young plants over the winter in the frames and set them outdoors in their permanent quarters in spring. Nearly all will bloom the year after sowing. It is astonishing how many species can be started in a little space. The frames pictured on plate 85 supply the largest private alpine garden in America — Mrs. Higginson's.

The ideal way to propagate alpines is to grow them from seed of your own saving, as it germinates quicker and better than foreign seed. However, the easiest and cheapest way is to start with English or Swiss seed.

There are now about a dozen men who make a living by collecting and growing American plants, and surely they deserve encouragement. There is one in Vermont, one in Massachusetts, and one in New Jersey, from whom almost any Eastern rock plant worth growing can be secured in quantity. Another man has spent a small fortune in educating people to like the hardy flowers of the southern Appalachians. A Coloradan has collected most of the Rocky Mountain flowers worth growing. The mountains near Salt Lake now have their devoted student. The wonderful

bulbs of the Pacific coast have been gathered by a great enthusiast. A Georgian has collectors everywhere and offers seeds of all the famous far-Western flowers. And doubtless there are others of whom I have no knowledge.

It may seem that I have wandered from my theme of "English Effects" by speaking so much of American rock plants, but every wild flower mentioned in this article is actually grown in English rock gardens and every one is procurable from English seedsmen or nurserymen — in many cases easier than from our own. In conclusion I think we ought to right about face and *show England that we can make rock gardens quite as lovely as hers, and with an American character too, instead of blindly copying every thing she does.*

ENGLISH EFFECTS WITH LONG-LIVED BULBS

CHAPTER XXI

ENGLISH EFFECTS WITH LONG-LIVED BULBS

The cheapest way of growing flowers by the million in wood, meadow, and orchard, where they will multiply without care and create visions of supreme beauty

BY FAR the most important lesson England has to teach us about bulbs is that they furnish the cheapest way of growing flowers by the million in wood, meadow, and orchard, where they will look and act like wild flowers, multiplying without care and finally creating visions of supreme beauty.

For example, take the two daffodil pictures on plates 86 and 87. You could see these yellow flowers tossing "their heads in sprightly dance," on your own grassy land, without any sign of the spade or handiwork of man! It is hard to realize that daffodils live as long as apple trees and are surer to bear a crop every year. Yet there is a field near Trenton, N. J., where they have been blooming every April for one hundred years without care!

From the economic point of view wild gardening is absolutely justified, because it is the cheapest form of gardening. These daffodils, for instance, cost one or two cents a bulb. They *do not interfere with a hay crop in meadow or orchard.* By the middle of June, when you are ready to cut hay, the leaves of the daffodils will have ripened, turned yellow, and fallen flat upon the ground. The same is true of all other spring-blooming bulbs that have strength enough to force their way through the turf year after

year. They do not seriously reduce the hay crop, and cutting the hay does not harm them at all.

But *can foreign flowers ever look like wild flowers* in America? Certainly. The poet's narcissus is not native to England, but who knows or cares, save the botanist? The great thing for England is that it multiplies of its own accord, producing myriads of fragrant, starry white blossoms in May, and bending before the breeze with as much wild grace as any native flower you could name.

So, too, there are dozens of beautiful foreign plants that have *run wild* in America with little or no help from man, *e. g.*, the buttercup, sweet rocket, Johnny-jump-up, spiked loosestrife, wall pepper, barberry, and marsh mallow. It comes as a surprise to us to learn that these are natives, not of America but of Europe.

The underlying principle is this: Any flower will look wild if it can hold its own or multiply without care in the long grass or in the woods. The costliest flowers in the world will not look wild if they last only a season or two, or if there is any evidence of the spade or watering pot.

England is the home of wild gardening, and we must go there to see how to make the most ravishing pictures with bulbs. I cannot see that the English have any great climatic advantage over us in respect to bulbs. They can grow a few kinds with which we usually fail, *e. g.*, the florist's anemone and ranunculus, the winter aconite, European cyclamen, Grecian wind-flower, and Apennine anemone. On the other hand, we can grow gladioli better than they. Their early spring gives them twice as long a season for daffodils as New England has, for they have many varieties that will bloom in March. They have a commercial advantage in being able to buy bulbs very cheaply, while we have a big duty to pay.

88. DAFFODILS PLANTED IN A NATURAL AND PICTURESQUE WAY, NOT IN SOLID MASSES AS IN A NURSERY, NOR YET SCATTERED AIMLESSLY. UPPER POOL, GRAVETYE.

On the other hand, America ought to excel England in wild gardening because we have more land and wealth and a greater variety of climate, soil, and plants. Eventually we must grow our own bulbs so that they will blossom in every door yard in the land.

The best English effects with bulbs are easy to reproduce in America, because all we have to do, in most cases, is to plant the bulbs in good soil this fall and they will bloom next spring. In other departments of gardening it is necessary for us to use many substitutes or equivalents. In the case of bulbs we can generally use the identical varieties grown in England.

WOODLAND EFFECTS WITH BULBS

I must confess that I reached England too late for the daffodils, and my conceptions of their April effects are therefore drawn from their books and magazines which I have tried to follow for the last fourteen years. The best way to consider them is month by month.

In *February* they have snowdrops (plate 89) and sometimes the winter aconite which makes sheets of yellow there but not here.

In *March* they have a great variety of little blue flowers, especially scillas, glory of the snow, and the dainty little grape hyacinths.

The first flowers of good size and many colours are crocuses, which are said to look thoroughly wild in some places. I can well believe it, for crocuses seed freely here, though most people do not know it, because the seed pods are formed near the ground. In the lawn crocuses cannot sow their own seed, but in the woods they have a chance to multiply in this way, as well as by the corm. If

I am not mistaken, crocuses are running wild at Professor Sargent's home in Brookline, Mass.

The grand effects in English woods come in *April* with the daffodils, ending with the poet's narcissus in May. The most artistic result is secured, not by merely scattering the bulbs as we commonly do, but by arranging a dense mass, with small outlying colonies in the direction of the prevailing wind, so that the latter seem to owe their origin to seeds borne on the breeze from the large group. (See plate 87.) We often make the mistake of planting bulbs in solid blocks, like a nursery, or in immense areas of equal density. Also, and it pains me to write these words, we often set them out in straight lines or patterns.

Another reason why English woodlands are so exquisite in daffodil time is that owners are content with the *cheapest varieties*. Our rich men are often carried away by their enthusiasm and plant costly varieties simply because they can afford them. Also, they have a way of dumping into woods large flowered varieties after forcing. But no one can make daffodils with red cups or five-inch flowers look wild in the woods, or big florists' varieties with very broad petals and perfectly fluted trumpets. These spectacular flowers show the handiwork of man and therefore belong in the garden, not the woods. There are twenty-six varieties costing one and two cents a bulb that are more appropriate than those costing four or five.

The next great flower show in English woods is that of bluebells in *May*. (See plate 24.) I saw acres of bluebells carpeting the ground so thickly that it was impossible to avoid stepping on them. When we Americans speak of "bluebells" we mean the harebell (*Campanula rotundifolia*), a fibrous-rooted plant that blooms more or less all summer. That is the bluebell of Scotland,

but the bluebell of England is *Scilla festalis*, known to bulb dealers as *Scilla nutans*. It ought to be called "wood hyacinth," for that exactly expresses its appearance, since it has none of the gross stiffness of the Dutch hyacinth. This charming flower stands about two feet high in deep shade and bears about ten flowers on a stem. There are pink and white varieties which are as tender and pure as the most refined Roman hyacinths. All three of them are naturalized with exquisite effect along a woodland walk at the Higginson place, South Manchester, Mass. The bulbs cost about fifteen dollars a thousand.

But we must not merely copy English effects, and our best way of developing an American style of woodland gardening is to concentrate on bloodroot, fawn lily (or adder's tongue) and *Trillium grandiflorum*, which ought to be planted by the thousand on every country estate where these precious flowers do not already carpet the forest floor in great and glorious masses.

MEADOW EFFECTS WITH BULBS

English meadows in May are as thickly sown with stars as the heavens at night, for every country gentleman plants many thousand bulbs of the poet's narcissus, a fragrant, six-pointed flower which the English call "pheasant's eye," from the red-rimmed saucer in the centre of the flower. This is the cheapest of all bulbs for naturalizing, costing only five dollars a thousand, or half a cent a bulb.

In a meadow we find very different conditions from the shade and loose undergrowth of woods. Here we have full sunshine and a turf that is generally too deep and close for crocuses and other small bulbs. Therefore, with the exception of narcissi, we find a different set of bulbs from those that thrive in woods.

A quaint and charming meadow flower is the snake's head or guinea hen flower, a pendant white lily bell, marvellously tesellated with purple. In old-fashioned gardens you may sometimes see the guinea hen flowers idly swinging their bells, but it is a sensation of a lifetime to watch thousands of them responding to a gentle breeze that ruffles the lush meadow grass in May. The bulbs cost only a cent and a half each by the thousand. This flower is known to bulb merchants as *Fritillaria Meleagris*. The popular names are objectionable. Checkered lily is distinctive and descriptive.

In June the lemon lily is very lovely in English meadows, its narrow leaves blending perfectly with the tall grass. (See plate 25.) *Hemerocallis flava* is much more refined than *H. fulva*, the orange day lily. It is best to confine them to areas that can be easily protected from the mower.

The grandest American lily that grows naturally in meadows is the American Turk's cap (*Lilium superbum*), a nodding orange flower thickly spotted, and with petals rolled far back. It reaches its grandest proportions — eight feet high and forty-five flowers on a stem — only in moist, peaty soil and partial shade. However, if it does even a third as well in meadows it is a glorious sight. It blooms in August. The English cannot grow this species as well as its Pacific coast equivalent — the leopard lily (*L. pardalinum*).

Another American bulb that grows naturally in meadows is the purple camass or quamash (*Camassia esculenta*), which grows about two feet high and bears in July ten to forty starry flowers of dark blue or purple. The English sometimes grow the camass, and it costs them only a cent a bulb by the thousand.

In September autumn crocuses are very interesting with their pink, white, or purplish flowers three or four inches across. (See

plate 89.) The cheapest, longest-lived, and best species for naturalizing is *Colchicum autumnale*. The objection to it in gardens is that in spring it has big, coarse leaves suggesting skunk cabbage. Possibly the meadow is the best place to naturalize autumn crocuses.

But the most important meadow flowers of England are the narcissi. I judge that the English are generally careful to choose the sun-loving varieties for this purpose as they do the shade-lovers for the woods. The richest colours are preserved only in the shade of deciduous trees, and in selecting varieties for the meadow we must be careful to find out which ones will not bleach in the sun. There is an English catalogue that lists all the varieties which are strong enough to battle with grass and tells which of them will stand the sun and which must have partial shade. There is no longer any excuse for us to plead ignorance because Kirby's book on daffodils tells the limitations of the varieties in America so far as they are known.

Hundreds of Americans bought last year a mixture of narcissi for the wild garden which was said to contain four varieties that would extend the period of bloom to six weeks. The varieties were guaranteed not to overlap seriously. This is a great improvement over indiscriminate mixtures, as the poetic quality vanishes when more than one variety is in bloom at once. But there is an even more artistic idea. Buy the same four varieties separately and plant them separately in the same field, leaving an irregular strip of grass of considerable size between any two colonies. Then there is no bewildering scatterment, but a series of bold irregular colonies such as you see on plate 87. Trumpets and starry narcissi will not harmonize in the same group, and when several kinds bloom at once, some will look "washed out" by contrast.

Double daffodils are naturalized by the acre in England, but the most refined taste objects to double flowers of any kind in wild gardening. With that exception Americans should tie to Mr. Kirby's list on page 88 of his book, favouring the cheapest varieties in every case.

WATER SIDE EFFECTS WITH BULBS

The most enchanting of all floral pictures are those which are mirrored in the water. The English understand well the value of narcissi on the banks and the necessity of planting the margins everywhere, except as clearings are needed for boat landings, bridges, and other practical needs.

The finest bulbs for water side planting are the irises. Strictly speaking, the only bulbous irises are the English and Spanish, which are too gardenesque for naturalizing, as also are the German. But the rhizomatous irises are regularly sold in the fall by bulb dealers, and culturally the distinction is of small importance. Dwarf irises are likely to be overrun at the water side, but tall ones are very lovely there.

Fortunately, the tall yellow flag that grows well in Europe does very well with us and so do Japanese irises which have the largest flowers of all, often eight inches across and sometimes ten or twelve. I wish some one who owns half a mile of brook would show us thousands of Japan iris in bloom as I saw them at the gardens of the Royal Horticultural Society. A faint idea of this glory is given by the picture at plate 90. But good taste suggests that he omit the double and variegated sorts, contenting himself with a few varieties of simple colours.

So far I have spoken only of wild gardening, which implies a large scale of operations and considerable wealth. But all the

other ideas here advanced can be applied in almost any yard by people of moderate means.

SHRUBBERY EFFECTS WITH BULBS

It is even possible to adapt the wild gardening idea to any yard that is large enough for a border of shrubbery. For instance, grow among your bushes narcissi and all the March blooming bulbs named above. Have only one kind of daffodil between any two shrubs. Plant large clumps.

Then you will enjoy a flower show in your shrubbery border before the bushes put forth their leaves. That is a time of year when the heart craves flowers, and this is one of nature's combinations — shrubs and bulbs. Neither interferes with the other. Both are permanent.

RHODODENDRON AND LILY EFFECTS

Another English idea about bulbs that can be applied in any yard large enough for a bed of rhododendrons is to grow lilies in the same bed. This combination enables city dwellers to have gorgeous colour about their houses for three months after the rhododendrons have ceased to bloom. The first cost is heavy, but maintenance costs little. The beds need to be dug only once. Every year thereafter a mulch should be added, but there is practically no other care.

FORMAL BEDS OF BULBS

I must confess that formal bedding is one of many subjects beyond my ken. I take little interest in methods which involve forcing and throwing away bulbs or digging them every spring, curing them in summer, and replanting in the fall. So I will merely mention what is done by Lord Northcliffe at Sutton Place

to make flower beds interesting all summer without the annual digging of bulbs in May and planting of geraniums or cannas.

He has several large beds of Darwin tulips in which seeds of annual flowers are sown. Among many that I saw in bloom were clarkias, godetias, lupines, candytuft, the annual Anchusa, love-in-a-mist, catchfly, Shirley poppies, larkspurs, Nemophila, calliopsis, *Statice sinuata*, and *Phacelia campanularia*.

To my depraved taste these flowers seemed very pretty, but I dare say that park gardeners will pooh-pooh the idea.

BORDER EFFECT WITH BULBS

Formal beds appeal strongly to the beginner, but he soon finds that an irregular border of hardy perennials gives him a greater variety, a larger season, and more flowers for cutting.

The only drawback to a border is that most perennials bloom for only two weeks. Nobody likes to have large portions of his border devoid of bloom for a long time, and so many good gardeners have gotten into the habit of alternating perennials, *e. g.*, a clump of peonies, a clump of chrysanthemums, then peonies again and so on. This gives two crops of bloom from every square yard or thereabout.

I saw a still better idea in England, *viz.*, *bulbs and carpeting plants*. The objection to alternating peonies and chrysanthemums, or any other plants that make a lusty growth at the same time, is that they *compete* with each other. On the other hand, bulbs and carpeting plants *supplement* each other. The carpeting plants protect the bulbs from alternate freezing and thawing quite as well as unsightly manure, and the bulbs look their prettiest when they have a background of foliage instead of dirt. (See Chapter XXIV.)

Every hardy border ought to have permanent bulbs on it, especially Darwin tulips and daffodils, and when these die down there should be something to cover the ground. So this year I am trying all the pinks I can get hold of and all the stonecrops or sedums, which the English use so much for this purpose. And I hope some of my readers will get seeds of rock-cress or plant in permanent bulb beds any thrifts or mossy little plants that are available .

BULB COLLECTORS' GARDENS

I hope we shall see the collecting spirit develop wonderfully in America during the next ten years, for there is a heap of fun in it and it will do a lot of good. A man who grows fifty varieties of daffodils in a separate garden has something his friends and neighbours are bound to talk about.

A separate garden containing fifty varieties of irises is very pretty and a life-long delight, but fifty kinds of lilies would not make a beautiful garden.

If peonies are bulbs, then fifty varieties of peonies make a lovely bulb garden.

But the oldest and most famous garden of this kind is the tulip fancier's collection, which is still a beautiful institution in England. We have nothing like it. The beds usually have iron railings around them which support canvas, for tulips are easily spattered by a rain. The fancier's tulips are the rectified or variegated tulips, of which we know comparatively little. Any one who wishes to learn about this delightful hobby should send for a little pamphlet called "The English Tulip and Its History," by Rev. F. Horner and others. It costs about fifty cents to import.

It is unlikely that the English tulip fancier's point of view will ever become popular here, but American collections of Darwin

tulip are now becoming rather common. These and the cottage tulips seem best adapted to American social and labour conditions, because Americans demand long-stemmed flowers for cutting, and do not like the bother and expense of digging and replanting bulbs every year. There are over two hundred varieties of Darwins to choose from.

TALL CLUMPS ON THE LAWN

Our common plan of scattering specimen plants all over a lawn is hopelessly bad, and the right thing is to make irregular borders along the sides and at the back of a lot. However, two or three beds of specimen plants may be used on a small place, and strikingly beautiful pictures can be made by planting the tallest growing bulbs. A dozen or two bulbs of the old-fashioned tiger lily, planted in a separate bed, near a projection of the hardy border, may grow as high as a man and present a very stately and showy picture. *Lilium Henryi* is the only other lily I can recommend for this purpose.

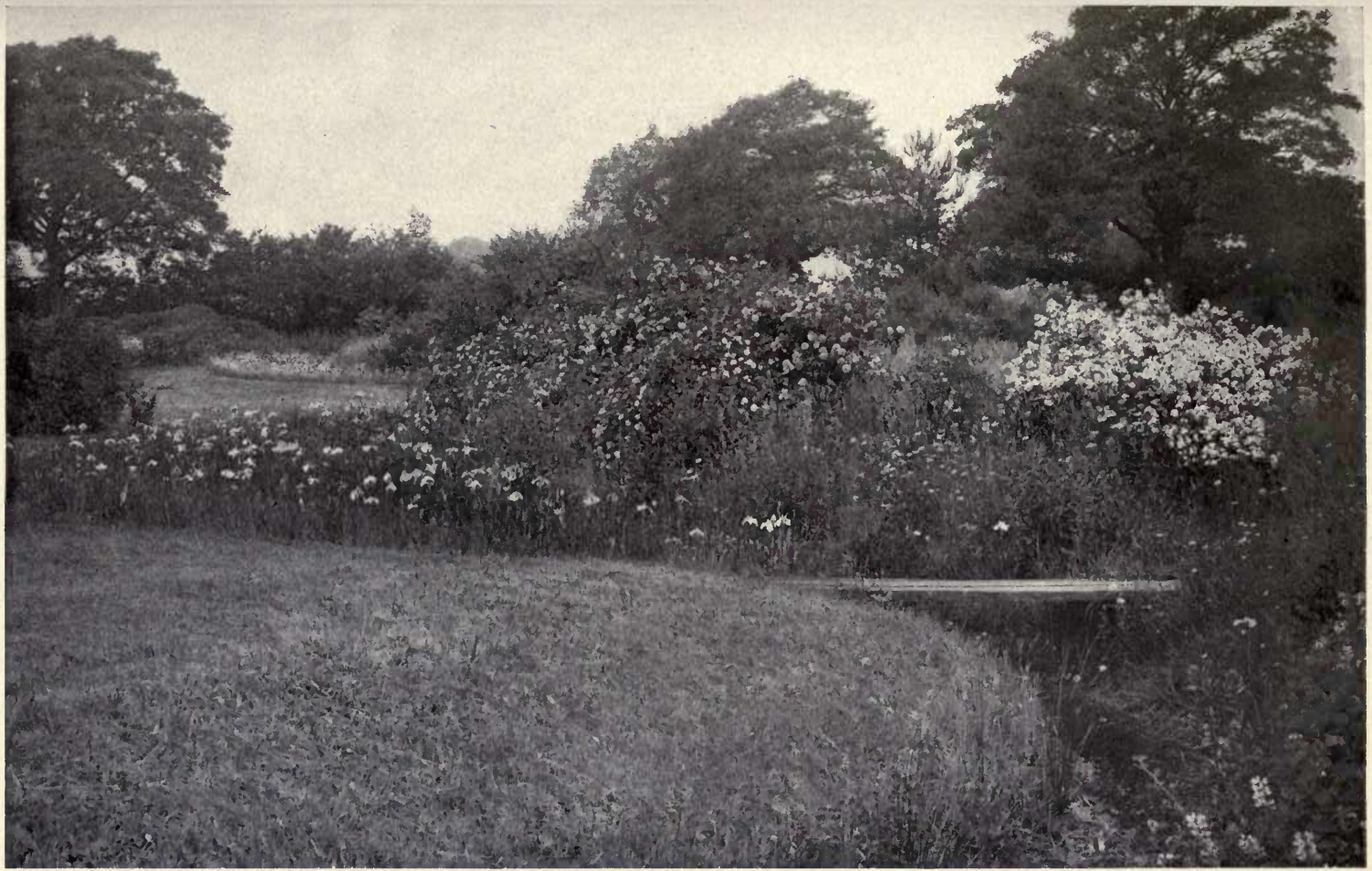
The other bulbs used for bold clumps on the lawn are not so spectacular, because they grow only three to four feet high. Still they are very satisfactory. They are here named in the order of their bloom: Bleeding heart, peonies, lemon lily, madonna lily, summer hyacinth, Japan iris, and *Lilium speciosum*. These are more permanent that the golden banded lily, hardier than montbretias and the torch lily, and more fitting than the crown imperial.

OUR CHIEF NEED — INSPIRATION

It is easy enough to get information about the species and culture of bulbs, but what we need most is inspiration about pictorial ways of growing them. There are dozens of such

89 SNOWDROPS ARE THE FIRST FLOWERS OF SPRING. "FAIR MAIDS OF FEBRUARY," THE FRENCH CALL THEM. ENGLISH PARKS HAVE MILLIONS OF THEM. *See page 263*

"AUTUMN CROCUS" (*Colchicum autumnale*). A PINK FLOWER FOUR INCHES ACROSS, WHICH BLOOMS EVERY SEPTEMBER WITHOUT CARE. *See page 267*



90 JAPANESE IRISES NATURALIZED ALONG A BROOK THAT DRIES IN SUMMER AT THE GARDENS OF THE ROYAL HORTICULTURAL SOCIETY. (THEY ARE NOT STRICTLY BULBOUS, BUT RHIZOMATOUS.) PLANT THEM AFTER BLOOMING. *See page 268 and plate 32*

91 THE EXQUISITE FINISH OF ENGLISH LAWNS IS LARGELY DUE TO THE EDGING OF SHRUBBERY, WHICH CARRIES THE EYE EASILY FROM GRASS TO TREES AND VICE VERSA.

See page 277

pictures in "The Garden" if one has the patience to turn over many volumes. Perhaps the most inspiring book on bulb culture is Kirby's "Daffodils." The most complete planting table for bulbs is in *Country Life in America* for September 1906, page 515.

ENGLISH EFFECTS WITH EDGING AND CARPETING PLANTS

CHAPTER XXII

EDGING AND CARPETING PLANTS

The elegance and perfection of English landscapes and gardens are largely due to these connecting or transitional plants which give the finishing touch to a good design

THE intoxicating beauty of English landscapes and gardens is chiefly caused by two things — luxuriance and finish. Such luxuriance we may never hope to attain until we begin to love our own American trees, shrubs, and vines and make them dominant in our plantings as the Europeans do with their own native vegetation. By "finish," I mean elegance, perfection, the last touch that makes an exquisite picture. This finishing touch is often supplied by edging plants or "ground covers" — low growths that carry the eye from the greenery of grass to that of the shrubs and trees without a break.

The perfect lawn is one that is free from trees and bushes except at the borders, where it is fringed by shrubbery. This idea is illustrated by plates 11 and 91. The dignity of this scene is due chiefly to the tall trees. The peacefulness and repose therein are mainly owing to the unbroken lawn, which seems greater and richer than it really is, because its surface is not speckled with showy plants. And the elegance of the picture is largely due to the shrubbery, which makes the transition between lawn and trees. To realize the truth of this last statement one has merely to think away the fringe of bushes.

How different this is from the "camp meeting" style of grove

in which we Americans often take complacent pride! Many people, otherwise cultured, take it for granted that there can be nothing finer than a grove carpeted with grass. For picnics, yes; for beauty and privacy, no. Call to mind the loveliest woods with which you are acquainted. Do they not have flowers within and a fringe of shrubbery without? So, too, the private parks of England would lose their elegance and finish if there were no fringe of shrubbery. This fringe, however, should not be continuous, as it often is in nature. There should be a long, solid stretch of bushes to give seclusion to those in the wood and to make the grove poetic, mystical, alluring. And then there should be a break with a glimpse of cool ferns amid cathedral columns, or gorgeous masses of distant rhododendron bloom. And at such opening there should usually be a path or trail. Such is the spirit of the English park — a spirit that would ennoble our groves, pleasure woods, and tree-girt lawns.

SHRUBS FOR EDGING LAWNS

Any kind of shrubbery will make a transition between trees and grass, but most of the bushes that we love for their flowers, especially the tall ones, are deficient in foliage at the base. Therefore the most finished effect is produced by edging tall bushes with low ones, whose branches arch over and meet the grass. Such are *Forsythia suspensa*, which has yellow flowers in April; Van Houtte's spirea, with white blossoms in May; *Philadelphus Lemoinei* (plate 103) *Stephanandra flexuosa*, with white flowers in June; Regel's privet, with white flowers in July; the shining sumach, with greenish clusters in August; the yellowroot, which begins to colour finely in September; the Indian currant, whose purple berries last until November; and, best of all, the Japanese

92 TUFTED PANSIES IN THE FRONT ROW, THEN TEA ROSES, THEN BOX. FRAGMENT OF A HUGE PARTERRE, IN WHICH 80,000 VIOLAS ARE USED FOR EDGING ROSE BEDS. W. W. ASTOR'S. *See page 97*

barberry, which is attractive the year round, and especially in winter, by reason of its scarlet berries and the delicate tracery of its branches.

It would be an excess of refinement to furnish a perfect transition everywhere — first tall bushes, then medium, and finally low ones. Where every thing is delicate, we miss the robust and virile. Tall trees seem taller when no bushes are allowed in front of them. On the other hand, if all the lines in a landscape are strong and rugged, we feel the need of a feminine touch. When you go outdoors to-day, apply these principles to the front yards that you see. Determine where you would sweep away the bushes and where you would put them in. I believe that ordinarily you will wish to put in ten shrubs for one that you pull out. The showy yards of our proud cities may have a certain barbaric splendour, but I think you will conclude that they usually lack refinement and repose. If you can go to the country, study the landscapes that seem most restful and soothing, notice the transitions that nature makes between wood and field — the rounded, billowy masses of sumach and the like. You will conclude that restfulness is due to gently flowing lines and that the harsh right angle between trees and grass is best hidden by shrubbery.

EDGINGS FOR FORMAL GARDENS

If edging plants are important on the lawn they are doubly so in the garden, where we wish every foot of ground to do its best. The most famous edging plant for gardens and formal flower beds is box, and rightly so, because it is evergreen and breathes "the fragrance of eternity." (See Chapter XV.)

But in this case the purpose of the edging plant is not to furnish a transition, for the edging is often taller than the flowers

within. The real purpose of box is to outline the design. For, in a formal garden the main thing is the design, while in the naturalistic garden it is the flowers. Now, design can be more pleasantly impressed by means of cool lines of evergreen foliage than by broad gravel walks, which are hot and tiresome in the sun. Thus box has been used for edging from classical times, and as it usually lives longer than anything else in a garden, some people maintain that it is impossible to have a charming formal garden without it.

In olden times the common, or tree, box was used for edging, but in the life of every garden comes a period of neglect and then the tree box overruns the walks and flower beds, thus obscuring the original design. Dwarf box is therefore better for edging flower beds, but it involves a long wait. Little plants only six inches high may cost one hundred dollars a thousand and look painfully small for several years. Box edgings need to be trimmed to a line once a year in May. They are said to be ruined sometimes by neighbouring plants overhanging them and by salt thrown upon the walks to kill weeds. They rob the flowers of plant food and are supposed to poison the ground for certain kinds. It is necessary to grow an extra supply in a reserve garden to fill gaps. There are many other drawbacks to the use of box. Before deciding to use it, every one should inquire in the neighbourhood about its hardiness and what kind and degree of shade, if any, seems best.

PERMANENT EDGINGS

If you can satisfy all the conditions, box will preserve the design for many human generations, but if not, the only permanent materials are "dead edgings," such as stone, brick, or tile. I saw

93 WHITE PINKS ARE PERHAPS THE BEST FLOWERS FOR EDGING. THEY ARE COVERED WITH FRAGRANT FLOWERS IN JUNE AND THE SILVERY FOLIAGE IS ALWAYS ATTRACTIVE, EVEN IN WINTER. MAJOR ROGERS, RIVERHILL, SEVENOAKS, KENT. (*See page 281*)

WE CAN USE ENGLISH IVY AS A GROUND COVER IN THE NORTH WHERE IT WILL NOT THRIVE AS A CLIMBER ON ACCOUNT OF ITS SUSCEPTIBILITY TO INJURY FROM THE WINTER SUN. IT IS ALSO SOMETIMES USED FOR EDGING BEDS. WATERINGBURY, KENT

See page 283

all sorts of abominations in England that we never dream of — ornate tiles, fancy bricks, and even cast-iron intricate patterns. They were always getting out of plumb or being cracked by frost and I cannot understand why any one ever invented them or ever found a purchaser. They are supposed to save the expense of trimming box but their first cost is heavy and some of them have to be carefully set in cement. Heaven defend us from their hard lines and glaring colours and intricate ornamentation! The motive behind all this tawdry art is display, whereas the only sensible object of a dead edging is to save labour in weeding, by sharply defining the walks.

The only dead edging that pleased me in England was natural stone. In some princely gardens I saw stone copings elaborated by skilled workmen into designs of rare beauty, but I heard sorrowful tales of their chipping and splitting from the action of frost. But the best effect came from using rough-dressed stone of the neighbourhood, setting the blocks in a fairly straight line, but without bothering to make all the blocks the same length. In the moist, cool climate of England lichens and algæ soon obscure the marks of the chisel, and the chinks are filled with precious little flowers like the wall pepper, the Minorca sandwort, Kenilworth ivy, etc., which bring the stone into a natural and loving relation with the soil. And the prettiest feature of all is to see these stones overgrown by some live edging, such as stonecrop, thyme, or bellflower. This type of edging is the one approved by William Robinson, and in describing it I have used many of his ideas and phrases.

FLOWER EDGINGS FOR THE GARDEN

But the most affecting loveliness, in my opinion, is that which comes from the use of flowers for edging garden walks. Take, for

instance, the white pinks shown on plate 93. These unpretentious little flowers, that crouch at one's feet, appeal to one's protective instincts like helpless children. But they do their work marvellously well. They smother all weeds; they define the walks; they fill the air with the scent of cloves in June; they are covered with flowers during their season; their silvery foliage is attractive even in winter; and they soften and glorify the lines of garden paths. It is no wonder that Mr. E. T. Cook says (in the "Century Book of Gardening") that they are the most popular of all flowers for edgings.

My own impression, however, is that tufted pansies are the favourites in England at the present time. They have one great advantage over pinks in blooming all spring and summer, with the exception of a fortnight's enforced rest. Pinks bloom once and are gone until next year. There are several "everblooming" pinks in the catalogues, but I have never seen any I cared for. Either they have poor colours or poor form or else they split their calyces. Doubtless there are many fine pinks I have never seen, but surely tufted pansies bloom longer and they are also available in a wider range of colours — blue, yellow, violet, etc. These tufted pansies, or violas, have smaller flowers than the ordinary kinds and will actually bloom freely through our hot summers. Some idea of their charm may be had from the picture at plate 94, which, however, shows one of the simple old types having the narrow petals of *Viola cornuta*, the chief parent of this race. The latest varieties are decidedly showier, because broader petalled. I expect to see millions of these pansies sold in America every year. The only drawback to them I know of is that they are said to get "sick of the soil" in two or three years, and have to be removed or they will give out suddenly. They cannot be regarded as permanent edging material, but they are certainly longer-lived than

94. THE HORNED VIOLET (*VIOLA CORNUTA*), CHIEF PARENT OF THE TUFTED OR BEDDING PANSIES.

ordinary pansies, and you can propagate by cuttings the one variety you like best. I wish every one who reads this article would try some tufted pansies in a rose bed next spring. Or if you wish enough to edge a walk and cannot afford to buy the plants, get some seed and sow in flats in coldframes.

These, then, are the great edging plants in England — pinks and tufted pansies. For variety they use thrifts, which make neat evergreen sods and bear tidy balls of rosy flowers on long stems; moss pink (*Phlox subulata*), in refined varieties; rock-cress (*Arabis albida*); an exquisite harebell known as *Campanula pusilla*, which I fear we can grow only in rockeries, and saxifrages without number. These last we cannot grow, except possibly the London pride (*Saxifraga umbrosa*), which seems to me the most valuable of all because of its evergreen rosettes.

We particularly need *white-flowered edging plants that bloom in summer.* White, because white is the peacemaker in the garden. Summer-blooming, because white flowers make a garden seem cool and restful. If there is any nurseryman or amateur who has a white-flowered variety of the lemon thyme I wish he would send me some plants for experimentation as I think that would make an ideal edging plant for America — white flowers, summer bloom, evergreen, and fragrant foliage.

FRAGRANT EDGINGS

This brings me to a fascinating subject — the use of fragrant herbs for edging paths in a flower garden. A garden can hardly be charming without sweet odours and I fancy that some of the fascination of the old Italian gardens is due to their bay, myrtle, and lemon, which makes them ever fragrant. Flowers are scented only when they bloom, but leaves will give forth their odour when-

ever they are brushed against. Therefore, an evergreen edging plant, with fragrant leaves would be a great advantage, but I fear we shall never have any in the North, except box. Sweet gale is evergreen in England, but not here. Rosemary hedges are common in warm countries, but they would not be sufficiently hardy or evergreen for Northern gardens. The most fragrant evergreen native to the Northern United States is the balsam fir, which is obviously unsuited to gardens. Wintergreen would be too low for some gardens, and requires shade from the mid-day sun. Perhaps some genius will give us a dwarf hemlock with foliage more fragrant than the ordinary.

Lavender is not only fragrant, but evergreen and hardy in England. "Lavender walks" are a famous feature of English gardens. One sees them four feet high and several hundred feet long. Full-grown lavender is too tall for garden use without clipping. However, there is a dwarf variety that minimizes clipping or even renders it unnecessary. Unfortunately, lavender is not hardy in the North and we cannot have lavender edgings except as a summer feature. Thus, even if expense need not be considered, we miss the charm of age in this plant.

Geraniums, also, are only a summer feature but they are so easily carried over the winter that they are worth serious consideration. They have a wonderful variety of odour in their foliage, but some varieties have bad colours which would make havoc in a garden. The nutmeg geranium, however, has white flowers and white is the safest colour in edging. Some one ought to make a collection of all the geraniums that have different odours — the apple, lemon, nutmeg, rose, etc., and tell us about their suitability for edging.

Obviously, however, a fairly permanent plant should be the

FANCY WALKING ON THIS VELVETY MOSS FOR A QUARTER OF A MILE UNDER BEECH TREES! A UNIQUE EFFECT AT CLIVEDEN, ESTATE OF W. W. ASTOR

ideal. The fraxinella or gas plant is very permanent and is redolent of lemon, but it is rather tall for gardens, a little too oily, and too slow to propagate. Lemon balm is delicious, but rather homely and coarse for a refined flower garden. The only native shrubs I know that have fragrant leaves are bayberry, sweet fern, and aromatic sumach, but the first two are scraggly and all would require too much clipping. Sage and the other culinary herbs make an interesting collection in a vegetable garden, but they are rather coarse for a flower garden. Probably the best fragrant-leaved plants we can have in the North for edging gardens are the white-flowered varieties of thyme. Beside the common thyme, there is creeping thyme, of which the lemon-scented and woolly leaved sorts are varieties. These are evergreen in the North, but how attractive is a question.

The garden is not the only place where an Englishman likes to see every foot of ground covered. He has the same ideal for his estate and for his whole island. This is nature's ideal too. For, wherever man leaves a bare spot nature attempts to cover it, though she may be able to do so only with plants we call "weeds." Bare earth is not essentially ugly, but if it remains so for a long time it suggests barrenness, poverty, unhappiness. On the other hand, luxuriance suggests peace and plenty. Consequently the Englishman often covers the ground beneath the trees in his park with ivy, producing great expanses of evergreen verdure, a glimpse of which may be had at plate 93. In America we leave such spots bare instead of going to the woods to see what nature does under beech, pine, or maple. We have not yet found cheap but fitting methods of bringing all the distant parts of an estate up to a high pitch of luxuriance, beauty, and joyousness. We can and should. And the solution lies in our own native plants of low

growth that have a genius for spreading, such as Virginia creeper, partridge-berry, wintergreen, the larger American cranberry, etc.

I cannot go into this great question of cover plants. I can merely suggest some of the possibilities. This principle of covering every foot of ground can be applied even to formal flower beds. For instance, a bed of Japanese flowering crabs (plate 102) is carpeted with heath. Here we have a bed that not only possesses two periods of bloom, but is even attractive in winter by reason of the evergreen covering of heaths. Is this not better and cheaper than planting every year with tender bedding plants?

But the most astonishing bit of greenery I saw in English woods was a carpet of moss at Cliveden, the home of W. W. Astor. Imagine walking for a quarter of a mile under century-old beeches on a gravel driveway that has been absolutely covered with a thick carpet of velvety moss of the richest luxuriance! The important thing to learn from this is that the finest of all mosses reaches its highest beauty under beech trees and whenever we have a chance to make beech dominant we have a chance to reproduce that magical yellowish green atmosphere which is the most enchanting that can permeate any forest. (Plate 95.)

No one of us now living may hope to see America as a whole smiling with the luxuriance or finish of old England, but *every one of us who owns a little land can bring every foot of it up to the English standard of efficiency and loveliness.*

ENGLISH EFFECTS WITH HARDY BOG PLANTS

CHAPTER XXIII

ENGLISH EFFECTS WITH HARDY BOG PLANTS

The unique charm of orchids, pitcher plants, lilies that grow ten feet high, and other superb flowers which will thrive only in soil that is always moist

I HOPE I have no reader who imagines for one instant that "bog gardens" have anything to do with mosquitoes, malaria, green scum, bad smells, wet feet, or anything unhealthy or unpleasant. If so, let him read the chapter on Peat Gardens and his prejudices will melt away as "breath off'n a razor." Fifteen minutes in Sir Henry Yorke's bog garden would turn the most hardened skeptic into an enthusiast for life. The man whose soul does not thrill at the sight of a colony of lady slippers (plate 33) must be in a bad way. And these hardy orchids are typical of the wonders of the bog garden, many of which are amongst the shyest and most exquisite flowers in the world. The bog garden is a notable institution in England, and it should be even more popular in America, for, heaven knows, we have pest holes enough that should be drained and filled.

The ideal thing to do with a bit of low, wet land is to dig out enough of it to make a little lake and, if the land be springy, a brook leading to the lake. (See plate 96.) For then you can solve the whole problem of mosquitoes and malaria by simply putting gold fish into the lake. The running brook will do away with scum and sour soil. The splendid water supply will make every

plant grow with luxurious abandon. The lake will attract birds to splash in the water and butterflies to hover over the flowers. Every flower that fringes the lake will have its loveliness doubled by its reflection in the mirror below. And, finally, the running brook will make your garden musical the year round, its every note brimming with suggestions of happiness and health. Truly, a delightful picture!

Another advantage in having a bog garden is that you *can't help succeeding* with it. The water insures that. The wonderful luxuriance it will produce is a never-ending delight. No matter how rare, costly, or interesting any plant may be, one cannot enjoy it to the full if it looks starved, dwarfed, unhappy. And water side plants are so obviously prosperous and contented that it makes one happy just to look at them.

THE EFFECT OF TROPICAL LUXURIANCE

For example, you have probably seen and admired a border plant known as the giant knotwood (*Polygonum Sieboldii* or *cuspidatum*). In the hardy border it may grow three feet high, but at the water side it grows six feet high and makes a huge, round bush that is a perfect cloud of white bloom in July. And this water magic is even more remarkable in the case of another knotweed, known as sacaline (*Polygonum Sachalinense*), since the latter is altogether too rough and coarse for a formal garden. In the bog garden this objection vanishes and the plant takes on new interest. It is like the piece of stage scenery which seems outrageously crude when one stands right by it, but sufficiently refined when one is at the proper distance. In other words, the first æsthetic demand that a bog garden makes is for a certain number of plants on a heroic scale to illustrate the magical effect

96 WHY NOT DRAIN YOUR WET LAND, MAKE A STREAM OR POND LIKE THIS AND PLANT WATER-LILIES AND JAPAN IRIS? ROYAL HORTICULTURAL SOCIETY GARDEN. IMAGINE THESE FLOWERS TO BE SIX TO NINE INCHES ACROSS

of water on vegetation. Of these heroic plants there are about three types.

First, the very tall plants. All the following attain six feet, and some twelve:

Moonpensy daisy (*Chrysanthemum uliginosum*).

Joe-Pye weed * (*Eupatorium purpureum*).

Ferula Tingitana.

Sneezeweed *(*Helenium autumnale*).

Slender sunflower * (*Helianthus orgyalis*).

Cow parsnip (*Heracleum villosum*).

Swamp rose mallow * *Hibiscus Moscheutos* — *Hibiscus Crimson Eye* — *Hibiscus Mallow Marvels.*

Reed*(*Phragmites communis*) — Giant knotweed (*Polygonum Sieboldii*).

Sachaline (*Polygonum Sachalinense*).

This will show, in a general way, how much the English are indebted to America for their best bog garden effects. And it should encourage us, for there can be no question about the hardiness of the plants. Moreover, nearly all of them are very easy to grow, and practically all can be had from American nurserymen.

Second come the plants with wonderfully *big leaves*. Among these the greatest favourite in England is the Gunnera (see plate 97), which has the largest leaves of any plant in cultivation—often six feet across, sometimes ten. Unfortunately, it is not hardy enough for our Northern states. The nearest substitute for it is *Rheum Collinianum.* Other water-loving plants with big leaves are:

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* All the plants marked * in this chapter are American wild flowers.

Caltha polypetala.

* *Saxifraga peltata.* (See plate 21.)

Senecio Clivorum. (See plate 102.)

Senecio Wilsonianus.

Third are those plants which are a never-ending marvel because of the uncountable *multitude of their stems and flowers.* For example:

Lysimachia clethroides.

Lysimachia Ephemerum.

**Lysimachia punctata.*

**Lythrum Salicaria*

GORGEOUS FLOWERING EFFECTS

While luxuriant foliage seems to me the first thing to provide for, the "man from Missouri" will want to know what are the showiest flowers he can have in a bog garden. Here is a short list. Are these flowers large enough?

Siberian iris, 4 inches.

Tall yellow iris, 5 inches.

Japanese iris, 9 to 12 inches.

**Lilium Canadense, 4 inches.*

**Lilium superbum, 4 to 5 inches.*

Hibiscus Crimson Eye, 5 to 6 inches.

**Hibiscus Moscheutos, 5 to 6 inches.*

Hibiscus Mallow Marvels, 6 to 10 inches.

And if our Missouri friend still doubts whether a bog garden is any good let him consider the following plants which have smaller individual flowers but are notoriously splendid in mass:

**Asclepias incarnata.*

**Caltha palustris,* (see plate 100).

97 THE LARGEST LEAVES OF ANY PLANT IN CULTIVATION ARE THOSE OF THE GUNNERA. THE LEAVES OFTEN MEASURE SIX FEET ACROSS. BUT ONLY NEAR THE WATER SIDE, AND ONE HEARS OF LEAVES OCCASIONALLY ELEVEN FEET IN DIAMETER. NOT HARDY NORTH. *See pages 291, 325*

98 THE SENSITIVE FERN IS ANOTHER AMERICAN PLANT WHICH IS OFTEN SEEN IN ENGLISH BOG GARDENS, WHERE IT DOES WELL. (*Onoclea sensibilis.*) CAMBRIDGE BOTANICAL GARDEN

THE SHINING LEATHERY, UNDIVIDED LEAVES OF THE HART'S TONGUE, A FERN OF THE GREATEST INTEREST. *See page 301*

**Chelone Lyoni.*

**Lobelia cardinalis.*

**Monarda didyma.*

**Myosotis palustris.*

But, lest this seem too theoretical let me give the main features of the best bog garden I saw in England. Here are the largest colonies which Sir Henry Yorke has established, and I have arranged the plants in the order of their bloom. His main pictures are made with:

Azaleas, May.
Rhododendrons, June.
Japan iris, June.
Golden-banded iris, June.
*Canadian lily, July.
Japanese primrose, July.
†Torch lily, July to September.
*Purple loosestrife, August.
†Pampas grass, September, October.
Bamboos (foliage).

THE GRANDEST BOG LILIES

The most gorgeous lily we have east of the Rockies is the one that has been well named *Lilium superbum.* It has flowers about four inches across, orange, spotted with dark purple, and of the Turk's cap type, *i. e.*, the flowers are drooping and the petals rolled far back. It blooms in August. In sunny meadows or in garden conditions this lily may grow only three feet high and bear four to ten flowers, but in American bog gardens it towers to a height of eight or ten feet, each stem being crowned with a great pyramid of

* Not hardy North

bloom, often containing twenty and sometimes thirty flowers. The species nearest like it on the Pacific coast are Humboldt's lily and the leopard lily, both of which do better in England than *L. superbum.*

Second to superbum among practicable lilies for the bog garden I should rank the Canadian wood-lily (*Lilium Canadense*), which bears red or yellow bells in July. The European dealers take pains to separate these two varieties and they even have a third colour, *viz.*, orange. I saw all three at Iver Heath, and it was a pleasure to see them doing better in an artificial bog garden than I had ever seen them in nature.

It is customary to speak of "bog lilies," but no one should imagine that the bulbs themselves like constant dampness. Have no stagnant moisture in a bog garden, for it breeds sourness and scum and very few plants worth growing can stand it. The ideal is moving moisture — an unfailing water supply combined with perfect drainage. The bulbs of bog lilies should be a few inches above the line of constant moisture.

A LILY TEN FEET HIGH

I saw only one thing to beat *Lilium superbum* and *Canadense* in England. The summit of an Englishman's ambition is to grow the giant lily of the Himalayas which has been well named *Lilium giganteum.*

The picture at plate 99 shows the white trumpets, like those of an Easter lily, but larger and more numerous than on any lily you ever saw or heard of. Imagine a lily ten feet high, bearing twenty flowers, each nearly a foot long! It is very rarely that the dimensions here named are attained in England, but a lily only

99 THE GIANT LILY OF THE HIMALAYAS (*Lilium giganteum*), WITH WHITE TRUMPETS SIX INCHES OR MORE LONG AND EIGHT TO TWENTY ON A STALK. *See page 294*

six feet high, with only twelve trumpets which are only six inches long, is enough to take one's breath away.

Another feature which adds greatly to the interest of the giant lily is its broad heart-shaped leaves. I venture to say that you never saw a lily without long, narrow leaves and parallel veins. Indeed, parallel venation is one of the characters that separate the monocotyledons from the dicotyledons, the two biggest branches in the vegetable kingdom, so far as flowering plants are concerned. Yet this giant lily has broad leaves with netted veins — a great rarity indeed.

It is almost a "moral certainty" that any Englishman who owns a bit of moist, peaty land will try to grow *Lilium giganteum*. I was told that at Lord Walsingham's it "grows like a weed," attaining magnificent size and even sowing its own seed. But nobody expects to have such luck as this, and nobody pretends to tell other people just how to grow it. All agree that it must have bog garden conditions, *i. e.*, peat, shade for the lower part of the stems, and a never-failing supply of moving moisture, but beyond that all is experimental. It is essentially a "sporting proposition," and nobody who can afford twenty dollars a dozen for the bulbsseems to begrudge the price for there is a chance to make superb pictures with this giant lily in a sheltered nook, surrounded by huge rhododendrons and, perchance, a musical little stream running past.

HEATHS AND OTHER PEAT-LOVING SHRUBS

One of the most enchanting plant families is the one to which the heaths belong — the *Ericaceæ*. It is rich in bog plants of many different types of beauty. Some of the showiest are

mentioned in Chapter XXII. All the shrubs named below are native to our bogs.

SHRUBS OF THE HEATH FAMILY

Wild rosemary, *Andromeda polifolia.*
Rhodora, *Azalea Canadensis.*
White Azalea, *Azalea, viscosa.*
Dwarf Cassandra, *Cassandra calyculata.*
High-bush huckleberry, *Gaylussacia frondosa.*
Sheep laurel, *Kalmia glauca.*
Labrador tea, *Ledum latifolium.*
Deerberry, *Vaccinium stamineum.*
High-bush blueberry, *Vaccinium corymbosum.*

OTHER BOG-LOVING SHRUBS

Button-bush, *Cephalanthus occidentalis.*
Black alder, *Ilex verticillata.*
Long-stalked winterberry, *Nemopanthes Canadensis.*
Red choke-berry, *Pyrus arbutifolia.*
Virginia willow, *Itea Virginica.*

CREEPERS AND GROUND COVERS

Since Sir Henry Yorke's bog garden is naturally composed of peaty soil he could choose nothing more appropriate for covering the ground beneath shrubs than heaths of all kinds. These ericas and dabœcias are evergreen, and have a considerable variety in colour and season of bloom.

Another ground cover which he uses in great quantity is London pride (*Saxifraga umbrosa*), which I have praised elsewhere for its evergreen rosettes and its airy masses of dainty, white flowers. Most of the famous saxifrages cultivated in England are out

of the question for America, but London pride is a British wild flower which I hope some day to see naturalized in American woods, growing by the million and furnishing an evergreen carpet to delight eye and foot the year round.

He also showed me three pretty little creepers of which I must say a word. The first is a midget called *Gunnera Magellanica* (see plate 35). You would never guess its relationship to the species with the titanic leaves. It is a lovely plant for the margin of a pool. It takes to water like a duck, and it is amusing to see this hardy little Patagonian creeper ride over the surface of a miniature lake.

The second (pictured at plate 100) is the bog pimpernel (*Anagallis tenella*), a British plant related to the "poor man's weather-glass." It bears myriads of tiny pink flowers, and is also admirable for its slender stems and the beauty of its paired leaves.

Third is the ivy-leaved bellflower (*Wahlenbergia hederacea*) which bears a great many pale bluish-purple flowers, not half an inch long, in summer and autumn. The blossoms droop in the bud, stand nearly erect when in full bloom, and often droop again when in fruit. It is as innocent and appealing as a baby, with its thread-like branches and its diminutive leaves that mimic those of the ivy. This, also, is a British plant.

WILD FLOWER EFFECTS

This loyalty to the native wild flowers is an admirable trait in English country gentlemen. In the same spirit country gentlemen in America will some day see to it that their neglected woods are carpeted with wild flowers by the ten thousand as they were in the days of the Indian. One man will plant 1,000 bulbs of Jack-in-the-pulpit* at a cost of thirty-five dollars. Another will

make a hit with the swamp pink (*Helonias bullata**). And perhaps some one will discover the possibilities of the dainty little star flower (*Trientalis Americana**).

In short every wild flower that grows in damp woods should be lovingly studied by some one who has the patience to propagate it and help it establish a good-sized colony, for only when we grow a flower in a large mass, in its right environment, can we discover its true worth and meaning.

We must not hesitate to apply this principle to large, coarse plants that we ordinarily think of as weeds. For example, the viper's bugloss (*Echium vulgare*) is a draggle-tail weed along dusty roads, but at Iver Heath I saw it glorified almost beyond recognition by the easy magic of bog-planting. A single plant had attained the enormous height of four or five feet and the flowers were about an inch long. You can tell at once that it belongs to the borage family, for the flowers are reddish purple at first, but change to a bright blue and are borne in numerous one-sided spikes. It blossoms all summer, and at the time I saw it was a prodigy of bloom.

HARDY ORCHIDS FOR BOG GARDENS

I was eager to see the European orchids, having had some inkling of their glories from great picture books like "Hortus Eystettensis." There are thirty-six of them native to Great Britain. I judge that the showiest is the old original lady's slipper (*Cypripedium Calceolus*), a brown and yellow beauty that is almost extinct in Britain. Second in showiness, I suppose, is the great or fragrant orchis (*Habenaria conopsea*) a rosy purple flower, which is common in the wild throughout Great Britain and blooms all summer. Another famous orchid is the spotted orchis (*Orchis*

* Native to America.

maculata), which bears in June lilac flowers spotted with purple, while the leaves are green spotted with brown.

These and many other hardy orchids may be procured from English specialists in hardy perennials and, strange as it may seem, from some of the Dutch bulb dealers who print catalogues in English. It is impossible to grow orchids under ordinary garden conditions. They will thrive only in bog or rock gardens or in moist woods. Americans should begin with American species, of which there are fifty-six, the most desirable being the showy lady's slipper (*Cypripedium spectabile*). To this the English give the place of honour in their bog gardens as it is undoubtedly the loveliest hardy orchid in the world.

THE CHARM OF PITCHER PLANTS

Some day I propose to buy a New England farm with a sphagnum bog on it, just for the pleasure of growing hardy orchids and pitcher plants. Not that I care to study their insectivorous habits very deeply but I enjoy them socially. They are such strange, unique creatures that at first they seem to defy all the laws of man and botany. But our Northern side saddle flower (*Sarracenia purpurea*) has a certain wild beauty both in leaf and flower, and the Southern (*S. flava*) is undoubtedly the tallest and showiest of all. Fortunately, it has proved hardy in a sphagnum bog garden as far north as Massachusetts. English-bog gardens all have the purple pitcher plant, but they do not seem to know about the yellow one.

FRAGRANCE IN THE BOG GARDEN

The sound of running water and the fragrance of unseen flowers are two of the subtlest charms any garden may have. I cannot stop now to give a list of fragrant flowers, but I saw two plants with fragrant foliage in England, which I must describe.

The first is sweet gale or bog myrtle (*Myrica Gale*), which should not be confused with our native bayberry or candleberry (*Myrica cerifera*). "It is the only bush," said Mr. Amos Perry to me, "that grows with feet under water all the time." It is never a showy plant, as the flowers are minute and borne in short erect catkins; but it is very pleasant to brush against the foliage. When you grasp the leaves and crush them in the hand, there is a feeling of stickiness owing to the aromatic oil glands on the under surface of the leaves.

In great contrast to this bush is the Corsican thyme, the smallest flowering plant cultivated in gardens. I doubt if any plant in the world has so powerful an odour in proportion to its size. A full-grown plant is only about half an inch across, and consists of a rosette of leaves. It also has minute purple flowers which I have not seen. The fashion is to establish Corsican thyme in the chinks of a wall or walk, on stepping stones or wherever the foot may brush against it without crushing it. If you reach down to the ground and draw your thumb across this midget it scents the air for several yards in every direction. To raise such a plant from seed must be quite a job, yet wherever I saw it at all it seemed abundant, and I fancy it self-sows when established. The plants are offered by a well-known dealer in alpines, in Geneva, Switzerland, at ten cents each, and I should think a dime would just about cover each plant. Corsican thyme is sometimes described under the name of *Thymus Corsicus*, but the catalogues offer it as *Mentha Requieni*, and, according to Bailey, the proper name is *Calamintha Requieni*.

GRASS AND FERN EFFECTS

I have before me an English catalogue which offers fifty species of grasses, sedges, rushes, and hardy bamboos, suitable for wet

160 THE BOG PIMPERNEL (*Anagallis tenella*). A BRITISH CREEPER THAT IS COVERED WITH HUNDREDS OF TINY PINK FLOWERS. IVER HEATH. *See page 297*

MOUNTAIN FLEECE *Polygonum amplexicaule*. A HIMALAYAN PLANT WITH SPIKES ABOUT SIX INCHES LONG OF ROSY FLOWERS IN MIDSUMMER. IVER HEATH.

101 A DOUBLE-FLOWERED VARIETY OF THE MARSH MARIGOLD (*Caltha palustris*), ILLUSTRATING HOW THE ENGLISH LOVE AND IMPROVE AMERICAN PLANTS. *See page 292*

SHORTIA GALACIFOLIA IS ONE OF THE MOST EXQUISITE MEMBERS OF THE HEATH FAMILY. ITS EVERGREEN FOLIAGE BRONZES BEAUTIFULLY IN WINTER. IT CAN BE GROWN IN WOODS, RHODODENDRON BEDS, AND PEAT GARDENS. *See page 80*

places. A good many of them are variegated with white and yellow and these my taste would reject. There is beauty enough in the green-leaved grasses, especially the bamboos, particularly the one for which I proposed the name Riviere's bamboo, *viz.*, *Phyllostachys viridi-glaucescens*. This is noted for its great, billowy masses. Mr. Lynch, at Cambridge, told me it is the greatest cold-resister among the bamboos, and the best for large masses at the water side.

New to me was the perennial wild rice (*Zizania latifolia*), which makes a magnificent specimen plant, growing to the height of a man and having a bolder and wider leaf than the commoner species (*Z. aquatica*), which is an annual. (Plate 35.)

Somehow I failed to see that well-known British plant, the blue-lyme grass (*Elymus arenarius*), which is noted for its blue-gray foliage. It makes clumps about four feet high and some gardeners think it looks best if the flowers are removed.

As to ferns, the bog garden is just the place for them, since they need plenty of water and shade for their grandest development. I must have seen two dozen species in English bog gardens, and I know that fifty are available, but for use on a great scale I saw nothing better than our own cinnamon and royal ferns. I wish, however, that my friends would experiment on a small scale with the hart's tongue fern, which is pictured at plate 98.

THE PRECIOUS HART'S TONGUE

New to me was the hart's tongue fern (*Scolopendrium vulgare*), which every English child knows and loves for the breadth and brilliancy of its thick, leathery, undivided leaf. The picture is a fair portrait, but fails to show its charming environment. The hart's tongue grows on roadside rocks and walls, on shady

banks and in ravines and looks like a stranger from the tropics. It generally grows about a foot high, with leaves twelve inches long and one and a half to two inches wide. Few people know the extraordinary number of fantastic forms to which the hart's tongue has given rise in cultivation. A nursery firm at Sale, near Manchester, which issues the largest fern catalogue in the world (122 pages), offers sixty-two varieties of the hart's tongue, varying in height from six inches to two feet and cut and crested in many odd forms. But the original wild type is, of course, the most precious for the bog garden.

If there is anything in England that looks impossible to grow in America it is this same hart's tongue fern. Imagine, therefore, my astonishment on learning that it actually grows wild in the United States, and thrives as far north as Vermont! In this country it is a very rare plant, growing only on limestone rocks. Some of our botanists call it *Phyllitis Scolopendrium*. Two American nurserymen now offer the hart's tongue and I doubt not their stock has been propagated in the nursery. It would be scandalous to offer collected stock of so rare and precious a plant.

EFFECTS WE CANNOT HAVE

Our summers are too hot and dry for primroses. Near the sea-shore the air is cool and moist enough, but we shall never have primroses by the million in our woodlands, and we have no conception of dozens of alpine species which English amateurs tuck away in rock and bog gardens. One of the finest mass effects I saw was a colony of *Primula Japonica*, about one hundred plants, forming a ground cover under azaleas. It is hardy in our Northern states, but I doubt if it would self-sow as it does in England. Many of the primroses have piercing crimson and purple tones,

and *Primula Japonica* seems to me enjoyable only in deep shade.

Musk is another plant which the English can grow by the hundred or thousand as a ground cover in bog gardens or beds of rhododendrons and azaleas. It is a dear old plant, but there are much finer things for use on a large scale. We need not weep because we cannot grow it well in quantity.

Gunnera, pampas grass and flame flower (or torch lily) are the only other plants of the first importance in English bog gardens that are not hardy in our Northern states.

AMERICAN EFFECTS

On the other hand, it is highly probable that we shall be able to develop an American type of bog garden which will be very charming for we have a finer set of orchids and insectivorous plants, and we have many finer species of the heath family, or Ericaceæ.*

* For studies of swamp societies see Coulter's "Plants," pages 183 to 192 and the Fifteenth Report of the Missouri Botanical Garden, pages 38 to 71. "A New Gardening Hobby for Americans" in *Garden Magazine* for July 1907, pages 342 to 345 describes six types of bog garden. For "The Cultivation of Hardy Orchids," see *Garden Magazine* for August 1906, pages 12 to 15. See also works mentioned at end of Chapter VIII.

ENGLAND'S NEW KIND OF FLOWER BED

CHAPTER XXIV

ENGLAND'S NEW KIND OF FLOWER BED

It harmonizes with our climate better than our present plan, costs less, is attractive two months longer every year and abolishes annual digging and replanting

IF THERE is any one thing on which we Americans pride ourselves it is on being "up-to-date," or at least progressive, yet the style of flower bedding we commonly affect belongs to the same period as "hoop skirts, haircloth sofas, corkscrew curls, infant damnation, and b'iled dinners." I refer to that "aberration of the human mind," carpet bedding, of which William Morris said he "could not think, even when quite alone, without a blush of shame."

For it is a shame to shear plants unnecessarily, thus sacrificing all their natural beauty of form. It is a shame to banish or minimize flowers. It is a shame to consider the most complicated designs the most elegant. And it is a shame to get colour in such a crude and gaudy way when we can have material that will harmonize with our climate and environment. Or, in practical language, tender plants cost more than hardy ones, and carpet beds are empty and unsightly for at least seven twelfths of the year, from the first frost of autumn to the last one of spring.

William Robinson has changed the face of England by inducing people to sweep away most of this false art and restore hardy plants on a new and better basis. We have never had in America any such revolution in gardening because we have only begun to

have gardens. But every foot of England was, broadly speaking, cultivated to the utmost then, as now, so that the land was filled with old and precious gardens. This beauty was suddenly defaced when the bedding mania swept all hardy flowers out of many old gardens and transformed England into one gigantic crazy quilt. It is only faint echoes of all this that come to us in books. I used to think such talk merely "literary." But everywhere in England last summer I heard about "the real thing" from old men, who were refused admission to flower shows for their larkspurs, peonies, irises, and other hardy flowers. And on many fine estates I heard of great sums wasted in trying and discarding the bedding system.

Yet there was really some sense in the bedding system in the early forties. China and Japan had not been opened to the world and, therefore, about one half of the best hardy plants now cultivated were then unknown. Moreover, hardy plants, as a rule, bloom only two weeks, whereas geraniums, verbenas, and annual phlox will bloom for three months. It is no wonder that the gardeners tired of the hardy flowers then known, because many of them were unsightly, or at least commonplace, in foliage. For instance, the foliage becomes shabby in forget-me-nots, columbines, and sweet williams after these have bloomed; it is rather coarse and weedy in foxgloves and hollyhocks; subject to disease in phlox and larkspurs; commonplace in asters and gaillardias; and often disappears after blooming, as in the case of Oriental poppies.

Another reason why the old gardeners sickened of hardy plants is that the ordinary mixed border was not then, and is not now, artistic. They used to "dot" and "repeat," *i. e.*, use the same kind of plant singly in all parts of the border, the effect of which

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102 SENECIO CLIVORUM, WHICH HAS BOLD FOLIAGE AND YELLOW FLOWERS. THESE LEAVES ARE OFTEN TWO FEET ACROSS. OTHERS OF THIS CLASS ARE THE ORNAMENTAL RHUBARBS, CRAMBE, SENECIO BIEBERSTEINII, ETC. *See pages 292, 327*

A BED OF JAPANESE FLOWERING CRAB CARPETED WITH EVERGREEN HEATH. THE COUNTLESS WHITE DOTS IN THE LAWN ARE ENGLISH DAISIES, WHITE, SINGLE, HALF AN INCH ACROSS (*Pyrus floribunda* var. *Scheideckeri*)

103 A BED OF PHILADELPHUS LEMOINEI, SHOWING THE ARCHING GRACE AND STEMS COVERED NEARLY THEIR WHOLE LENGTH WITH FLOWERS. WE NOW HAVE A DOZEN LOW SHRUBS WITH THE SAME FAULTLESS HABIT. *See pages 278, 313*

THE "CONTINUOUS-BLOOMING EFFECT"— HARDY HYDRANGEAS. OTHERS THAT WILL BLOOM TWO OR THREE MONTHS ARE BABY RAMBLER ROSE, GAILLARDIAS, THE NAPOLEON III. PINK, MISS LINGARD PHLOX, ETC. *See page 311*

is generally weak and spotty. Nowadays we understand better that the only way to get strong, pure effects is to plan first for a few large masses.

So we cannot blame the old gardeners for preferring *three months* of bloom to *two weeks*. But the next step they took is hard to forgive, because tender foliage plants that have no beauty, save colour, are the most ignoble type of vegetation. I do not deny that coleus will give more colour for the money than any other plant that grows, and it submits with lamb-like grace to the shears. But so will billboards give colour — and twelve months, too, instead of five. A plant without growth, flower, or fruit is like a man without character. Carpet bedding becomes insufferably monotonous. It may be justified in small public parks, where people would steal flowers, but to make it the dominant feature of a private estate is really "a case for the blue wagon."

There are many disciples of William Robinson who go farther than the master. They cry, "Away with tender plants and carpet bedding!" and talk as if there were something high and holy about hardy plants *per se*. I do not believe in going to extremes in anything, and I defy any shouter for "old-fashioned flowers" to name any hardy plant that will do as much for the money as the geranium. Here we have good colour, three months of bloom, beauty of form in leaf and flower, fragrance, and extraordinary ease of culture. It is not necessary to use the varieties with piercing colours and leaves marked like Joseph's coat, for even the geranium is capable of quiet and cool effects.

In other words, tender bedding plants are not wrong in themselves, as many writers say; it is only the abuse of the bedding system that is wrong. Even in a private garden, a few beds of tender plants are usually desirable, because every garden needs at

least one spot of colour every day throughout the growing season, and I gladly acknowledge that tender plants will usually solve this problem better than hardy ones.

But now that the treasures of the Far East are lavished upon us we have hardy plants suitable for practically every purpose the most exacting gardener can conceive. And whenever we have any special object to accomplish we ought to *try nine times to find a hardy plant that will do the work before falling back on a tender one.* And this for two reasons: First, hardy plants harmonize better with our climate and environment than tropical plants. Second, as a rule, they are cheaper to maintain. And in the long run, those effects which grow naturally out of the soil and out of true economy will be recognized as the most artistic.

An artistic border, with bold, irregular outlines and strong mass effects, is better than any formal arrangement nine times out of ten, because a border has more variety throughout the season than a bed. But granting that you really need beds of formal shape, do you not prefer the effects here pictured to any that can be had with tender plants? Do they not harmonize better? Are they not cheaper in the end? Are they not a relief from the flatness of carpet beds?

It would be unfair and childish for me to rhapsodize about the *flowers* of hardy perennials, as opposed to mere foliage plants, because the real question is: "Are there any hardy plants with beautiful foliage that are suitable for bedding?" The answer is, dozens of them — dozens that will not grow tiresome when seen daily for five months. There is no need of getting five months of raw colour from plants with commonplace foliage, like coleus and alternanthera and acalypha, of which we use millions in America. A better idea is to make sure of beautiful foliage for at least five

months, and in addition have exquisite flowers, even if they only last a fortnight.

THE LONG-BLOOMING EFFECT

We now have at least twenty-five perennials and low shrubs that will bloom as long as tender bedding plants — say two months or more, *e. g.*, hydrangeas (plate 103), gaillardias, Miss Lingard phlox, Stokes's blue aster, the Napoleon III pink, the Baby Rambler rose, two kinds of hydrangea, *Eupatorium cœlestinum*, and certain varieties of Veronica and ragged robin with names a foot long.

But I place no emphasis on "everblooming" plants, because they are somewhat like a thirty-cent dinner with wine — they give rather too much for the money. It is an excellent idea to use a bed or two of them, so as to be sure of colour always, but to make them dominant is to destroy one of the keenest pleasures, *viz.*, a sense of the procession of the seasons. I hope the great majority of hardy plants will always definitely mark certain months, for the best thing to live with is not a "continuous performance" by flowers. Much better is a broken series of dramatic floral events. Therefore, let us turn from these "harpers on a single string," and see how we can have a variety of flowers at different times.

FOUR CROPS IN EVERY BED

Anybody can have four crops of hardy flowers in every flower bed, and I think most of us ought to be satisfied with that, provided the foliage does not become shabby. For instance, let the main feature be peonies. Between these plant bulbs of *Lilium speciosum*. Edge the bed with trailing myrtle. Then under this plant tulips. Thus you will get a small show of tulips in

May, a good display of peonies in June, scattering flowers from the myrtle all spring and summer, and a fair show of lilies in September. This bed may last ten or even twenty years without radical change. You avoid all the expense and ugliness of annual digging. You have perfect foliage in peonies and myrtle, and the deficiencies of any lilies you may plant will be hidden. For most lilies are thin or stiff in foliage effects, and are hard to arrange effectively, but here they have a good background.

Dozens of good combinations like the one given above can be made from the plants mentioned in this article, with the help of these four rules:

1. Try for an early and a late spring, a summer, and an autumn flower. Simultaneous effects are appropriate in the border, but for a bed, successive effects are better.

2. Select first the centre piece, preferably a low shrub or a perennial that grows two or three feet high.

3. Next choose the filler for the centre piece, preferably a bulb.

4. Then select a carpeting plant for the edging, making sure that it has perfect foliage. If the centre piece is bare or shabby at the base, choose an edger high enough to screen this fault. You can have a different kind of bulb under the edging.

THE BEST CENTRE PIECES

The late or Chinese peonies are the best for centre pieces because they are the longest lived perennials that can be obtained in many colours. They generally bloom in early June in the North. I would reject columbines, European peonies, sweet williams, foxgloves, larkspurs, poppies, Japan iris, bee balm, and most varieties of phlox.

The best perennials for the purpose, in my opinion are:

Bleeding heart	Early May
Peach-leaved bellflower	Mid–June
Gas plant	June–July
Japanese balloon flower	July–Aug.
Miss Lingard phlox	July–Oct.
Swamp rose mallow	August
Japanese anemone	Sept.
Subsessile veronica	Aug.–Sept.
Hardy chrysanthemums	Sept.–Nov.

LOW SHRUBS FOR BEDDING

I think we ought to use low shrubs for bedding, as the English often do. For (1) they are more permanent than perennials; (2) they are a pleasant change from the flatness of ordinary bedding; (3) some of them have brilliant autumn foliage in addition to their flowers. The best shrubs for this purpose, in my opinion, are those with *arching stems that meet the grass.* The following are all of this type, and the dates from September to March mostly refer to flowers or berries:

Magnolia stellata (Plate 104)	March
Forsythia suspensa (Plate 104)	April
Spiræa Thunbergii	May
Spiræa Van Houttei	May
Deutzia gracilis	May
Philadelphus Lemoinei (Plate 103)	June
Stephanandra flexuosa	June
Regel's privet	June–July
Rhus copallina	July
Blue spirea	Sept.
Yellow root	Sept.–Oct.
Symphoricarpos racemosus	Sept.–Nov.
Berberis Thunbergii	Sept.–Mar.

THE BEST FILLERS

For filling in between the most important plants we must have something that grows higher than the centre piece without taking much room. Therefore, bulbs are best, as a rule. I would reject

hyacinths and early tulips because they are not permanent enough; also English and Spanish iris.

The best, in my opinion, are:

Crown imperial	Early April
Daffodils	Late April
Poet's narcissus	May
Darwin tulips	May
Madonna lily	June
Lilium elegans	July
Lilium Henryi	Aug.
Lilium speciosum	Sept.

THE BEST CARPETING PLANTS

Carpeting plants should do three things: (1) hide every inch of soil; (2) furnish attractive foliage for seven months; (3) bear some interesting flowers. It is possible to carpet the whole of a bed, but there is no point in doing it if the shrubs or perennials in the centre would hide them. Consequently, the edge of the bed is all that needs carpeting. However, it is often a good plan to fill every inch of a bed with small bulbs like crocuses, glory of the snow, or scillas, which bloom in March and April before the bushes put forth their leaves.

I suspect that tufted pansies or violas will become the most popular plants for covering the ground because they bloom all spring and summer (except for an enforced rest of about ten days) and they have a great range of colours.

There are fully one hundred hardy perennials suitable for edging and carpeting. Among them are:

Adonis Amurensis	March
Russian violets	March
Iris cristata	April
Iris pumila	April
Golden tuft	April–May
Moss pink	April–May
Arabis albida	May

Ajuga Genevensis	May–June
Tufted pansies	May–Sept.
Cerastium tomentosum	June–July
Achillea tomentosa	June–July
Anemone Canadensis	June–Sept.
Carpathian harebell	July
Coral bells	July–Aug.
Hardy leadwort	Sept.–Oct.
Napoleon III pink	June–Oct.

THE FOURTH CROP

Underneath the carpeting plant it is perfectly practical to have a crop of bulbs. Indeed, bulbs never look their best when growing out of bare earth. They are far prettier when seen against a background of foliage that hides the soil entirely. These carpeting plants are so shallow-rooted that they do not exhaust the soil. If you have lilies in the centre of the bed, you can have an edging of daffodils or tulips. If you have tulips or daffodils in the centre you can have spring or autumn crocuses for an edging.

In this way it is easy to get flowers at four different seasons. If each one lasts a fortnight you will have eight weeks of bloom from hardy flowers. Indeed, I believe it possible to have three months of bloom in a hardy bed and attractive foliage for seven months without the expense of annual digging and replanting.

GAINING TWO OR THREE MONTHS

Any one can make a hardy bed look attractive two or three months longer than the best bed of tender plants in the world. There are two whole months in spring, or from March 15th to May 15th, when hardy plants will bloóm while tender ones would be killed by frost. This one fact is reason enough why we should try nine times to get a hardy combination before falling back on tender plants, because this is time when there is the greatest heart-hunger for flowers.

Among March and April bloomers there are Russian violets, the Japanese Adonis, the dwarf-crested iris, golden tuft, and moss pink. Under these we can grow snowdrops, grape hyacinths (plate 104), glory of the snow (see plate 104), and scillas, getting two crops of flowers before the ordinary flower beds are even planted, and this, too, without such extravagant methods as we see in the Boston Public Gardens, where everything is potted, forced under glass, and then set out.

Among the best October-blooming or frost-resisting flowers are pompon chrysanthemums, the Napoleon III pink, gaillardias, and nine kinds of hardy asters. Under the edging plants you can put three kinds of autumn-blooming crocuses and maintain a succession from September almost to Thanksgiving.

NEED OF EXPERIMENTING

The reader must not jump to the conclusion that any filler here recommended will do with any centre piece, or any bulb under any carpet. For instance, it is said that you can grow tulips in a peony bed, but not daffodils, because tulips can stand as much manure as peonies need, while daffodils cannot. The whole subject is experimental. Some successful combinations are known, but hundreds are still to be proved. Gardeners interested in this line of work ought to report their successes and failures to the horticultural press.

POINTS TO REMEMBER

In conclusion, it seems to me that there are only two positions of the first importance where formal beds are really needed, *viz.*, near the house and in the garden. For the first position the noblest plants are the broad-leaved evergreens, especially American

104 A BED OF MAGNOLIA STELLATA SHOWING THE WHITE FLOWERS IN MARCH. TWO MONTHS BEFORE TENDER BEDDING PLANTS ARE SET OUT. EDGED WITH GRAPE HYACINTHS.
See pages 313, 316

A FORSYTHIA BED CARPETED WITH GLORY OF THE SNOW WHICH BLOOMS IN MARCH. FORSYTHIAS HAVE GOLDEN BELLS IN MARCH. F. VIRIDISSIMA HAS GREEN BRANCHES. SUCH A BED HAS BEAUTY THE YEAR ROUND, WHILE BEDDING PLANTS ARE ATTRACTIVE ONLY FIVE MONTHS. *See pages 313, 316*

105 TAMARISK (NOT TAMARACK), SHOWING THE EXQUISITE HARMONY BETWEEN FEATHERY FOLIAGE AND PLUMY FLOWERS, WHICH ARE A TENDER PINK. TALL TAMARISK IS WEAK AND THIN; THIS IS KEPT LOW AND DENSE. KEW. *See page 215*

holly, mountain laurel, and rhododendrons, because these are attractive the year round.

In the garden, however, we want more colour, and for that we have hitherto relied chiefly upon tender plants. The great lesson that England has to teach us is that *we can now rely chiefly upon hardy plants which are more harmonious, dignified, and permanent, cost less to maintain, remain attractive two months longer, and save us the ugliness and expense of annual digging.*

THE RIGHT AND WRONG KIND OF TROPICAL EFFECTS

THE RIGHT AND WRONG KIND OF TROPICAL
EFFECTS

CHAPTER XXV

THE RIGHT AND WRONG KIND OF TROPICAL EFFECTS

What England can teach us about hardy "foliage plants"—They cost less than tender ones and harmonize with Northern surroundings—Beautiful leaf forms preferable to gaudy colours

ENGLAND has the right attitude toward the beautiful plants that come from the tropics. We have not. England knows how to get the spirit of tropical beauty and harmonize it with that of a Northern clime. We aim at the letter and succeed only in getting a meretricious and evanescent show of colour which does not harmonize with our climate and costs more than the better way of doing things.

We are just about seventy years behind England in this respect. For it was about 1840 that England was taken by the craze for tender bedding. You will still find in England coleus and other foliage plants of gaudy colour in beds that are quite as geometrical and complicated as those in any public park of America. There are also private gardens in the old style that are preserved as faithfully as if they were paintings of a school which, though no longer esteemed, has its place in the history of art. And in a country that is an endless succession of gardens you naturally expect to find every style of gardening and every shade of opinion. But England, as a whole, has definitely abandoned the bedding folly which still defaces American parks and is particularly obnoxious in private gardens. England has put her faith in hardy plants and I believe she will never change again.

For, in the first place, *tender plants can never harmonize with a Northern climate.* Their transitory nature is too obvious. When you look upon a canna bed you know that it will be a blank expanse of earth all winter, while our Northern trees are revealing beauties of outline and structure that are hid in summer. The tropics are beautiful the year round, but we intensify our winter bleakness and poverty if we make gardens that are bare five twelfths of the year.

The winter ugliness of a tropical bedding system might be forgiven if the summer effect were pure and good. But one half of it is as weak as it is well intentioned, while the other is as impure as it is strong.

For example, the plants that really enjoy our summer heat, such as coleus, alternanthera, and acalypha, are the *worst disturbers* of the peace. Their leaves may be showier than hardy flowers, but they are gaudy and monotonous. The purest and sweetest way to get colour in a garden is to have a succession of hardy flowers. In Chapter XXIV I showed how we can have flowers quite as long by the hardy system, and beautiful foliage two months longer.

On the other hand, there is no nobler or more characteristic tropical growth than the palm. But its nobility depends somewhat upon stature. Moreover, palms do not bear flowers or fruit until they reach a considerable age and height. The only way we can enjoy them to the full in the North is to have extra tall greenhouses built for them — taller than private means can afford. The day will come when every large city will have its palm houses where people may enjoy the wonders of the tropics in something like their native grandeur. Meanwhile, the palms, bananas, rubber plants, and dracænas that are grown primarily for summer show outdoors are a pitiful substitute for the real thing.

"My trip to the tropics," said a friend to me, "has forever spoiled me for enjoying the puny little palms which the park superintendents set out for tropical effects." It is all right enough to come upon a secluded spot where the contents of a greenhouse have been put outdoors for the summer. You understand at once that this is done for their health and that their real mission is winter beauty. But to try to make a big summer show with plants that ought to be seen as tall trees is alternately painful and ridiculous.

The logic of this is not so easy to see as in the case of the *gaudy and quicker growing* plants. Any person of taste can understand that leaf forms give deeper and more lasting pleasure than foliage of abnormal colours. "Why then," you may ask, "should we not have these palms, if we can get their leaf forms in no other way?"

The answer is twofold. First, we can and should have these identical plants from the tropics in our greenhouses, but they should *never be conspicuous in the landscape or prominent in the garden.*

Second, *every important leaf form in the tropics is approximated by some plant that can stay outdoors all winter and therefore the hardy plant should be given the preference in Northern landscapes and gardens.*

To illustrate this great principle let us take one of the six largest families of plants — the *Leguminosæ*, to which peas, beans, and clovers belong. This order is very rich in tropical plants of famous beauty, such as the acacias, mimosas, and tamarind. Now the very soul of their beauty is a kind of feminine grace and airiness which is due to their feathery foliage. Their leaves are composed of great numbers of small leaflets arranged with

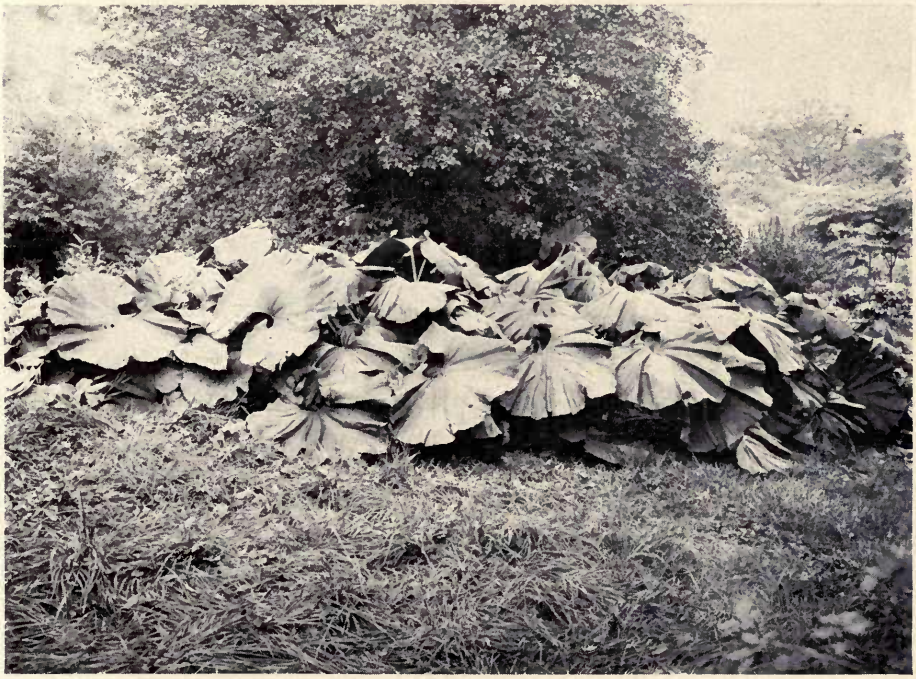
admirable precision, and not only are these highly compound leaves decorative in themselves, but they respond with myriad undulations to the slightest breeze; and the play of light and shade, as the sun's beams sift down through these innumerable leaflets, is a source of deep and never-ending joy.

The language of the botanists rarely helps us to understand beauty, but the word "pinnate" exactly describes the nature of this *feathery foliage*. It refers to a leaf composed of many leaflets which are arranged on either side of a common stem in a definite order, sometimes alternate, sometimes opposite, sometimes with a single leaflet at the end, sometimes not. Here then we have the physical basis, or body, of this kind of beauty.

Now let us examine the hardy members of the legume family. Among trees there are the honey locust, yellowwood, redbud, Japanese pagoda, and Siberian pea tree, all of which are beautiful in flower, while the common locust and the Kentucky coffee tree are not quite as showy. Among shrubs there is the Cassia or Maryland senna. Among perennials are Baptisia and Coronilla. And among climbers is the noble wistaria.

I freely admit that none of these is exactly like a mimosa. All of them have larger leaflets than the most refined acacias of the tropics. Doubtless they differ among themselves as much as an equal number of women. But they all agree in having a certain feminine charm. And I think that ought to be enough. For these plants bring to us the spirit of tropical beauty in a form that is adapted to our climate, since the plants remain outdoors the year round. The *letter* of truth would be to grow acacias in tubs in your greenhouse and put them in your garden in summer. But that seems to me a very small and poor letter, for it does not give us the birds and butterflies that belong with the acacia, and the

BUTTERBUR (*Petasites vulgaris*) HAS LEAVES TWO FEET ACROSS AND MAKES COLONIES SIX OR EIGHT FEET IN DIAMETER UNDER TREES THAT CAST A DENSE SHADE. A GOOD PLANT UNDER TREES THAT ARE BARE BELOW. *See page 326*



THE GIANT COLTSFOOT (*Petasites Japonica*, var. *gigantea*), WHICH HAS LEAVES FOUR TO SIX FEET ACROSS. SPREAD FROM A SINGLE ROOT AT SUTTON PLACE, HOME OF LORD NORTHCLIFFE. *See page 326*

tubs — well, they are tubs. These objections do not apply to the yellowwood on the lawn or the redbud in the garden.

AN INFALLIBLE RULE

So, then, we have a sure principle to guide us in bringing the spirit of tropical beauty to the North. We are not to pick out the showiest plants of the tropics and transport them bodily, for they fear the frost. Their faces, so to speak, blanch at the thought of it and, therefore, they can never look entirely happy or seem at home in our gardens. *The true way is to search out the hardy members of each family that plays a great part in the tropics.* These will look at home both summer and winter, for even when they are bare they will give us some beauty of outline, branching, bark, bud, or berry. In the case of herbs there will be only two or three months gained, but in the case of the trees and shrubs we shall get a dignity from their stature which we can never have from the tropical plants that are set outdoors for the summer.

WHAT WE MEAN BY "TROPICAL"

Nine times out of ten when we speak of "tropical vegetation" the chief idea in our mind is *luxuriance* of foliage, rather than any particular leaf form. I realized this during my first day in England, when I saw clearly that the overwhelming beauty of England is due chiefly to her great luxuriance. For when the earth seems teeming with fertility, everything looks prosperous and happy. America does not yet have this look, except in spots. One great reason for it is that hitherto we have relied chiefly upon European plants and these, broadly speaking, do not fit our climate as well as our own and those from China and Japan. Throughout this book I have been illustrating in many different ways a single theme, *viz.*, that America can never get this happy, prosperous

look, this "nearly tropical luxuriance," until *American* plants constitute the bulk of our plantings.

We must have a little "spice," however, and my present object is to explain the different ideas that roam about in consciousness when we speak of "tropical effects" or "tropical charm."

THE LARGE LEAF EFFECT

Undoubtedly one important element is the gigantic individual leaf. The conventional way of getting this effect is to set out banana plants, which are generally torn to shreds by a storm.

The most wonderful hardy plant of this type in England is the Gunnera, a water side plant with leaves often six feet across and sometimes ten. (See plate 97.) A New Jersey nurseryman claims that is it hardy with protection as far north as New York, but I doubt if it will ever thrive north of Virginia. The nearest we can get to it is *Rheum Collinianum*, which is the least like a rhubarb of all the many species I saw at Kew and elsewhere.

The grandest hardy trees with big leaves is *Magnolia macrophylla*, which has leaves a yard long and flowers a foot across. Long Island is about the limit of its hardiness.

The catalpa, paw paw, and empress tree, or Paulownia, have a tropical appearance, and their leaves are about a foot across. The gardeners have a trick of growing Paulownias in a formal bed and cutting them down every year, by which plan they get the biggest leaves. This seems to me a poor kind of beauty compared with the grand trees one sees at Flushing, L. I., especially when they are covered with their royal flowers. The bedding system sacrifices all the bloom.

Among perennial herbs with huge leaves are the two species of Petasites pictured on plate 106 one of which has leaves

about four feet long. The heart-shaped leaves and yellow flowers of *Senecio Clivorum* are shown on plate 102, and a gigantic Crambe covered with misty white bloom on plate 78. There are several species of plume poppy, or Bocconia, that have leaves like those of a fig.

MASCULINE EFFECTS

All large leaves tend to have a masculine effect in the landscape and there is one *leaf form* that is peculiarly virile. Here again the botanist helps us with his word "palmate," which refers to the outstretched fingers of the hand. The chief plant used by the "bedding crowd" to produce this effect is the castor-oil bean, but fan palms, abutilons, fatsias, and tender aralias are also turned out of greenhouses for the purpose.

A good hardy plant of this type is the elm-leaved spirea, which the nurserymen call *Spiræa Ulmaria*. The one they call *Spiræa palmata* has a spirited, amost eager, appearance. But it is possible for palmate leaves to look too eager. The aroids, an immense tropical family, are noted for their dragon-like leaves, and the names given them by the botanists refer to salamanders, demons, and other creatures with "claws to snatch." It is proper that these curiosities should be cultivated in greenhouses by collectors, but we ought not to have such diabolical suggestions in Northern gardens.

Indeed, the more this resemblance to the human hand is softened, the better it is for a country where people admire the strong man that has gentle manners. The grasping suggestion is likely to vanish when there are three or seven or nine lobes, instead of exactly five fingers, and when these lobes are cut or fringed, we get native strength clothed in delicacy. To this type

belong larkspurs, globe flowers, anemones, aconites, and other perennials.

Among trees the horse chestnut is a noble example; also the sweet gum, which has a starry suggestion. But the maples have more palmate beauty than any other hardy trees. The Japanese kinds are doubtless the favourites for subtropical effect, but our own red and sugar maple look more at home than any other trees with palmate leaves, and therefore ought to be planted on a larger scale than any other.

In other words, I should never use *palms* in a Northern landscape. Instead I should use hardy plants with *palmate* leaves, for these have the spirit of tropical beauty in bodies that are toughened to our climate.

BAMBOO EFFECTS

But we make a great mistake if we suppose that palms are all fan-shaped. Many, if not most, belong to the feathery, or pinnate, type of beauty. The Northern florist sells more plants of the feathery Kentias and Areca than of the fan-shaped Latania. And we find this feathery grace highly developed in another great tropical family — the bamboos. (See plates 107 and 67.) So full are bamboos of tropical suggestion that people are always surprised to learn that there are any which will survive a Northern winter. Yet a better rule of action would be to *assume that every tropical type has its Northern representative.* And in my experience the Northern plant is often more beautiful than anything of the kind in the tropics. What maidenhair can the tropics boast that has the beauty of our own *Adiantum pedatum*? And is there any plant in the immense family of aroids which has so innocent and boyish a prettiness as our own Jack-in-the-pulpit?

So with bamboos. There are six very fine species that are hardy at Philadelphia and I described many others in *Country Life in America* for March, 1905. Indeed, bamboos are nothing more or less than grasses, though they flower only after a long time and then die.

Among flowering grasses the most celebrated is pampas grass, great specimens of which are sometimes wintered in cellars as far north as Philadelphia. But I would rather have something that is hardier, even if not so showy, *e. g.*, the giant reed (*Arundo Donax*) and Ravenna grass. Eulalias I never loved, but sometimes they fit well.

There is a noble reed which raises its spears in serried ranks all summer, on the great salt meadows near New York, and in the autumn its military hosts are crowned by myriads of waving plumes. The name of this reed is *Phragmites communis.* No nurseryman sells it. I wonder why?

OTHER "FEMININE" EFFECTS

Bamboos and other plants of feathery character are generally considered to have a feminine type of beauty. But beauty is, of course, wholly subjective and therefore it would be absurd to follow such considerations far. I will, therefore, merely give a list of hardy plants with pinnate leaves, in order to show that we have plenty that fit our own climate, without importing plants from the tropics for summer use in gardens.

COMMON NAME	NURSERY NAME
Ash	Fraxinus
Hickory	Hicoria
Japan varnish tree	Kœlreuteria
Mountain ash	Sorbus
Sumach	Rhus
Tamarisk	Tamarix

COMMON NAME	NURSERY NAME
Tree of heaven	Ailanthus
Walnut, butternut	Juglans
Trumpet creeper	Tecoma
Bleeding heart	Dicentra
Feathered columbine	Thalictrum
Fraxinella	Dictamnus
Hardy gloxinia	Incarvillea
Jacob's ladder	Polemonium
Oriental poppy	Papaver
Peony	Pæonia

Roses, especially *R. rugosa, multiflora Wichuraiana* and their improved varieties.

CUT-LEAVED EFFECTS

Closely allied to pinnate beauty is the cut-leaved type of which cosmos and marigold are familiar examples. I shall mention only a few examples that give soft, misty effects and require less care than annuals.

COMMON NAME	NURSERY NAME
Milfoils	Achillea
Pyrethrums	*Chrysanthemum coccineum*
Giant fennel	Ferula
Tamarisk	Tamarix
Thunberg's spirea	*Spirea Thunbergii*

It is needless to pursue these analogies, but there is one great misconception about plants with highly coloured foliage that should be corrected.

HIGHLY COLOURED FOLIAGE EFFECTS

There are some enthusiasts about hardy plants who make a fetich of the idea of hardiness. They see nothing objectionable in a lawn peppered with copper beech, purple plum, golden elder, and variegated weigela because the plants are hardy. But I can see no reason why hardy plants with gaudy foliage are any better than tender ones. Strangely enough, there are some fifty hardy plants now used in conventional bedding because they have

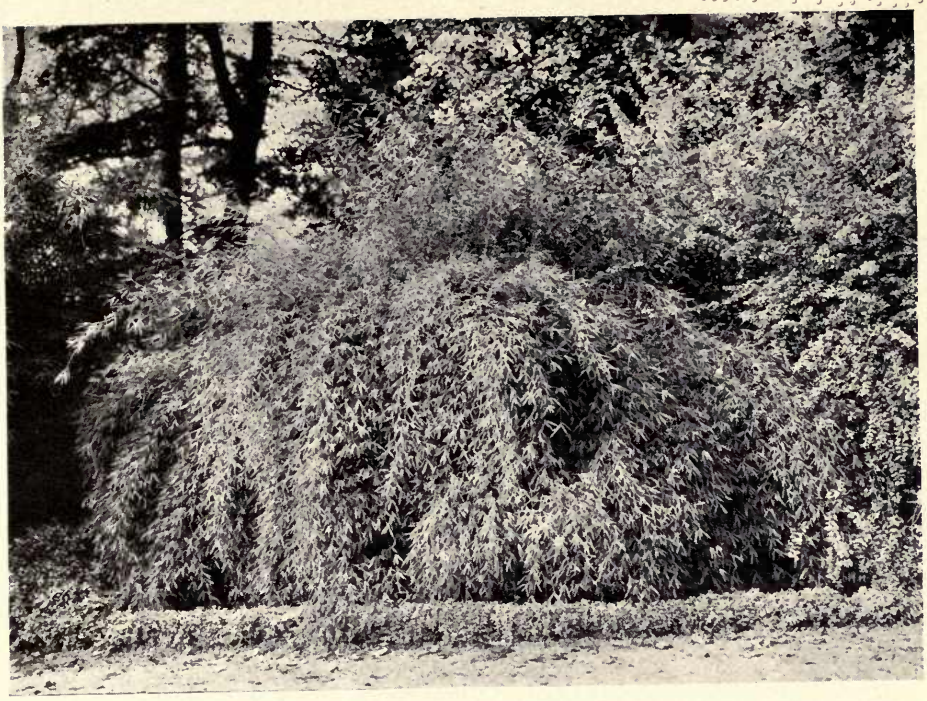
purple or metallic foliage or something else to "frizzle the eyebrows," as Dean Hole used to say. The great lesson we should learn is that *abnormally coloured foliage is too different to be used in any large way.* The most objectionable bedding effects are those produced by such unnatural looking foliage as coleus, horseshoe geraniums, alternantheras, acalyphas, and such foreign-looking flowers as lantanas, and mesembryanthemums. Moreover, all violent contrasts and intricate patterns are in questionable taste.

I said that there was a sweeter and purer way of getting brilliant colour and a long season of bloom. It is by means of hardy flowers, such as ever-blooming pinks, tufted violets, forget-me-not, woolly chickweed, evening primroses, pyrethrums, bugles, stonecrops, and many others mentioned in Chapter XXIV. And if, for any reason, they will not do the required work, we can go back to the loveliest of *annual* flowers for bedding purposes, such as heliotrope, verbena, stocks, nasturtiums, catchfly, and scarlet sage.

I would not rule tropical plants entirely out of Northern gardens for summer effect for I would not be extreme in anything, but we lean on these plants altogether too much. We should make them incidental, as England does. Until the desire for showiness gives way to the desire for appropriateness our gardens will lack charm. And until we stop looking to Europe for material and discover our own hardy plants we shall only make poor copies of Old-World gardens instead of achieving a national style of our own.

Since writing this chapter a notable book has been published —"Spring Flowers at Belvoir Castle," by W. H. Divers. Although devoted only to spring bedding, it shows how to carry

out a great many of the ideas I have suggested, giving invaluable details about propagation and cultivation. For instance, Mr. Divers explains how to give the beds a green appearance all the winter. Also he gives a good list of material and an admirable classification according to methods of propagation. For example, Class I contains "plants raised from division of the stock in March," Class III contains "plants raised from seeds sown in the year previous to flowering with the month of sowing," etc.



167 THE LADY BAMBOO (*Arundinaria nitida*), CONSIDERED BY MR. MITFORD THE DAINTEST OF THE HARDY BAMBOOS. *See pages 174, 328*

THE NOBLEST OF HARDY EVERGREEN BAMBOOS, HAVING LEAVES TEN TO FIFTEEN INCHES LONG AND THREE INCHES WIDE. GROWS FIVE FEET HIGH. PROBABLY BAMBUSA PALMATA. *See page 174*

LESSONS FROM ENGLISH COTTAGE GARDENS

LESSONS FROM ENGLISH COTTAGE GARDENS

CHAPTER XXVI

LESSONS FROM ENGLISH COTTAGE GARDENS

We cannot reproduce the charm of Old English examples — Our labourers' homes a national disgrace — The only way American cottages and their gardens may become altogether lovely

I CAN think of nothing lovelier of its kind than that passage in "Aylmer's Field" in which Tennyson describes typical homes of English labourers:

> "Here was one that, summer-blanched,
> Was parcel-bearded with the traveller's joy
> In Autumn, parcel ivy-clad; and here
> The warm-blue breathings of a hidden hearth
> Broke from a bower of vine and honeysuckle:
> One looked all rose tree, and another wore
> A close-set robe of jasmine sown with stars:
> This had a rosy sea of gillyflowers
> About it; this, a milky-way on earth,
> Like visions in the Northern dreamer's heavens,
> A lily-avenue climbing to the doors;
> One, almost to the martin-haunted eaves
> A summer burial deep in hollyhocks;
> Each, its own charm."

People who have travelled more than I, say that English cottages and their gardens are the most beautiful in the world. I saw thousands of them and they were endlessly delightful. Yet there is *almost nothing about them which I should care to have my countrymen copy.*

This conclusion is so unexpected and disappointing that I must defend it at considerable length, before setting forth what seems to me a better scheme. In the first place, I must answer the question which I am sure will spring into the minds of my readers

viz., "If there is nothing to copy, why is it that everybody is so enthusiastic about English cottage gardens?"

HALF THE CHARM EXPLAINED

In my opinion about one half of this universal rhapsody is due simply to the fact that *every cottage has a garden.* The American is used to seeing ugliness everywhere — wooden buildings, no national style of architecture, billboards, big advertisements, and houses without gardens. When he goes to England he sees beauty everywhere — houses built of brick and stone, a national style of architecture, no billboards, shop signs relatively small and modest, and every foot of ground cultivated to the utmost. These general conditions are enough to put the American in an enthusiastic mood, and enthusiasm rises to ecstasy when he finds that even the labouring people live amid beautiful surroundings. Every cottage is built of permanent materials and every cottage is surrounded by fruits, flowers, or other forms of living beauty. It all seems too good to be true, because American labourers generally live in big tenements or else in monotonous rows of wooden cottages, which are temporary and subject to disastrous fires, while the yards are usually bare and shabby or foul with weeds and rubbish. Therefore, I say the infinite number and variety of English cottage gardens is enough to explain five tenths of the American tourist's enthusiasm.

FOUR TENTHS MORE EXPLAINED

The second great reason why we cannot copy English cottage gardens is that about four tenths of their charm is *due to the cottages themselves* and these do not fit our present mode of life at all. I wish you could see the book that lies before me as I

write — Ditchfield's "English Cottages and their Doorway Gardens." It is full of beautiful photographs. But every time I put one hand over the cottage, its garden shrinks enormously in interest. The soul of it is gone. *Old* cottages in England are always either beautiful or picturesque, but on the practical side they are invariably deficient.

For instance, thatched roofs are dreams of beauty, and once upon a time they were economical in England, but in America they cost too much, and even in England it is against the law in some districts to thatch new cottages. Small window panes are poetic, but hard to clean. Rambling structures may be lovable, but they multiply steps and waste a woman's strength. Crooked stairs may be romantic, but they are dangerous. High roofs mean a waste of room.

The English cottage which nestles so sweetly among the ever-blooming roses was developed before people knew anything about germs and before the importance of ventilation and sunlight was understood. Picturesqueness is almost invariably associated with dirt, and dirt breeds disease. Dearly as I love the picturesque I would not buy it at the cost of healthfulness. It hurts me to say so, but *picturesqueness always means increased cost, both for construction and maintenance; and it usually means unsanitary conditions.* (See plate 108.)

Indeed, we enormously overrate the value of *the picturesque as contrasted with the beautiful.* The traveller finds the former more entertaining, but for living purposes the latter wears best (contrast the beautiful and picturesque on plate 109). Now the *beauty* of English cottages is chiefly due to the national quality in their architecture. But this grew out of *their* conditions — climatic, economic and historical — not ours. For instance, the

soul of an English cottage is its fireplace, and in that climate an open hearth keeps a cottage warm enough. Not so with us. Again, you cannot tell from the outside of an English house what the different rooms are used for. This is because the English have a passion for privacy. We do not, and our favourite type, the Georgian or Colonial, frankly reveals the purpose of every part.

Other fundamental differences could be given, but I wish to give more attention to the gardens than the cottages. It is sufficient if my readers are persuaded that to make exact copies of English cottages is foolish, and that we shall never have charming cottage gardens in America until we have charming cottages in an *American style*.

How shall we get an American style of cottage? Many people believe that we shall *evolve it by adapting the English style to our conditions*. That idea is dear to my heart, but I would rather abandon it entirely than see America filled with cottages that cost too much or do not fit the lives of the people. The first thing for architects to do is to satisfy American conditions, *e. g.*, our hotter summers and colder winters, the higher cost of labour and of living, the dangers from mosquitoes and flies, our passion for comforts, conveniences, air, sunlight, cleanliness, and our desire to reduce housework to the minimum. Then, if there is anything left of the English style, well and good, for it is pleasant to be reminded that England was our mother-country.

THE OTHER TENTH EXPLAINED

It is my conviction that nine tenths of the charm of English cottage gardens is due to the environment; only one tenth seems to me intrinsic. The gardens themselves owe their beauty to two

elements — the materials, or plants, and the national style of gardening.

THE MATERIAL TOO DIFFERENT

The easiest way to prove that we cannot copy English cottage gardens is to show that the *material is too different.* Let us go back to Tennyson's description and run over his list of plants. By "traveller's joy" he means *Clematis Vitalba*, which is somewhat like our own *Clematis Virginiana.* English ivy will not luxuriate in our Northern states as it does in Europe. "Vine" means the European grape and we cannot grow that outdoors east of the Rockies. "Rose tree" is the same as tree rose; standards are not hardy. By "jasmine" he means *Jasminum officinale*, the white jessamine of the poets, which is not hardy in the latitude of Philadelphia without a sheltering wall and winter protection.

But Tennyson's list is only the beginning of trouble. Roses are the most precious of all flowers. The English labouring man gets large, double, fragrant roses from June to October with a minimum of effort. He does not have to contend with the rose chafer, or "rose bug" as we wrongly call it. In America roses do not bloom all summer save on the Pacific coast. Climbing roses rarely reach to the third story of a big house. We find that roses require more care and cause more loss and disappointment in America than any other flower.

All *summer*, the cottager's yard is gay with flowers. While geraniums and cannas are about the only bedding plants that will bloom all summer here with a minimum of attention, the English cottager can have many others. To grow tuberous begonias in America requires peculiar conditions and considerable skill, but in England it is no trick at all. An American labourer may have a bed of coleus, which is as gaudy, flowerless and monotonous as it

can be. The English labourer can grow the calceolaria, a yellow flower like a lady's slipper, which is as refined and distinguished as anything you could wish. I saw thousands of front yards gay with calceolarias.

Even in winter an English labourer's garden is beautiful because the grass is evergreen, whereas with us it gets brown. Then, too, the English climate is favourable for broad-leaved evergreens, while that of the North is not. Cottagers often propagate their own box edging. English holly grows wild. And best of all their ivy is evergreen and grows like a weed.

No other examples need be given here because most of the important plants that thrive in England, but not in America, are mentioned in other chapters.

THE STYLE OF GARDENING DIFFERENT

Quite as important as the material in these cottage gardens is the difficult question of a *national style in gardening*.

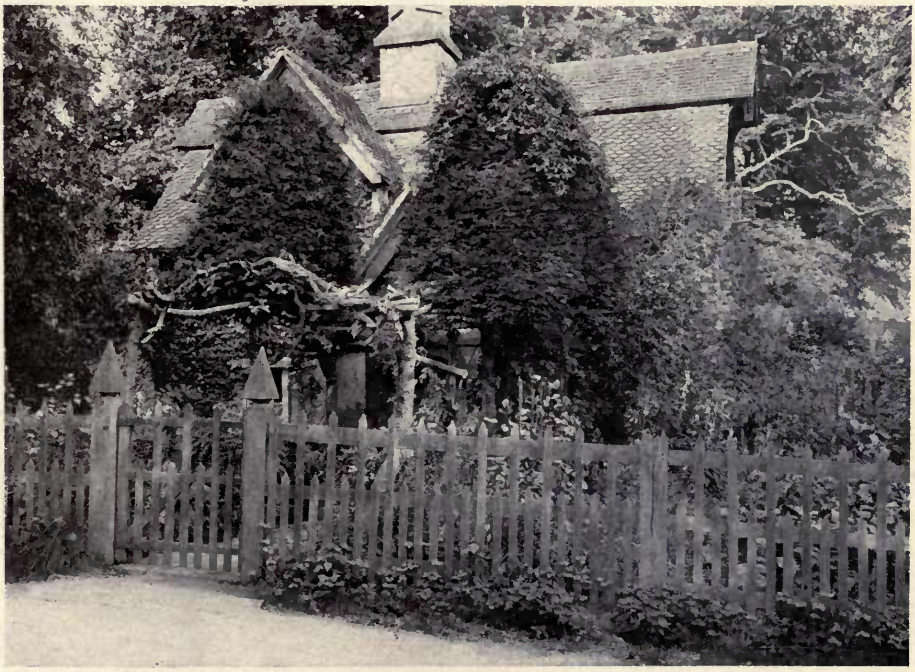
I was motoring through the Southern counties of England as the guest of one of America's best landscape gardeners, and we were exclaiming over the beauty of the cottage gardens when I propounded to my friend this question: "Is there anything peculiarly British in these gardens?"

"Not at all," he replied. "Of course the cottages have a national quality and they lend an English atmosphere to the gardens. But the gardens themselves have the same plants you see on the Continent, and there is nothing particularly English in the design. We do not see one type of cottage garden repeated many times. Every garden seems different. Indeed, I believe their beauty is *individual rather than national*."

This surprising conclusion may seem at first to be reinforced

A PICTURESQUE ENGLISH COTTAGE GARDEN, CHARMING BUT IMPOSSIBLE FOR US TO COPY ECONOMICALLY. MILLIONAIRES IMITATE THIS SORT OF THING BUT NOT LABOURERS.

See page 337



ENGLISH LABOURERS HAVE MORE TIME THAN OURS FOR GARDENING. SIMPLE TOPIARY WORK LIKE THIS IS BETTER THAN FIGURES OF MEN, BIRDS, ETC. NEAR PENSHURST.

See page 337

by Tennyson's passage which concludes with "each its own charm." Nevertheless, I believe there is a national element there — hard to define, but real. The nearest I can come to it is to say that *the English cottager is fond of fruits, flowers, and a low hedge or wall.* He trains grapes, plums, and peaches on the sunny walls of his cottage and ivy on the others. He is likely to have dwarf fruits. His garden is usually gay with flowers all summer and is pretty sure to have one floral specialty. His hedge or wall is not too high to see over, but it keeps out chickens, dogs, cats, children, and, to some extent, thieves.

These may seem intangible characters, but by means of broad contrasts you will see that they are real. For instance, southern Italy has such a hot summer that flowers are only an incident in the Italian style of gardening, while in England they are the main thing. Again, the San José scale discourages the American cottager from growing fruit, but this insect has not yet reached England. Finally, the Englishman's passion for privacy is unique and it shows even in the cottager's low hedge.

OUR NATIONAL STYLE

The American style of cottage gardening must grow out of the fact that our labourers do not have as much time for gardening as the English. We have about two hours less sunlight every day than the English people enjoy. That long English twilight would be worth billions of dollars to us. Possibly a seven-hour working day would about put us on a par with them.

This means that our labourers must settle down to growing plants which require less time and skill than the English cottagers have. Our men must grow less fruit, for there are more and worse insects to fight. English cottage gardens often have more flowers

than lawn; ours must often be content with having more lawn than flowers.

OUR COTTAGE GARDEN MATERIAL

From the nature of things the cottager can grow few trees or none. He hasn't enough space for tall trees, and they would rob his lawn and trees. He can hardly afford evergreens or magnolias. When all cottages are built of permanent material cottagers will get sick of the quick-growing trees like box elder and poplars, because they are short-lived. Flowering dogwood may prove to be his best tree.

The English cottager has few shrubs or none. Bushes take a good deal of room and do not bloom long as a rule. But the lawn-and-shrub garden may become the commonest in America, because it is easier to care for than a flower garden. The American cottager will go in for long-blooming shrubs, like hydrangeas. He cannot afford azaleas, Japanese maples, white fringe, dwarf horse chestnut. Rarely will he have good roses or lilacs. Let him have Van Houtte's spirea, golden bells, mock orange, Morrow's honeysuckle, and fragrant sumach, hardy hydrangea, cranberry bush, multiflora and rugosa rose, and plenty of Japanese barberry. Then his yard will be attractive the year round.

Our cottages should be nearly covered with climbers. Every one will want roses and Jackman's clematis, but successes with these will be few. The fittest to survive are Virginia creeper, Japan ivy, Hall's honeysuckle, trumpet creeper, wistaria, bittersweet, and wild clematis. The ideal thing would be to have every north and west wall covered with English ivy or climbing euonymus.

Prophecy is rash, but necessary, for it is only another way of stating our ideals. The American cottager eventually will

THE ENGLISH COTTAGER GENERALLY HAS MORE FLOWERS THAN LAWN BUT THIS ONE HAS MORE LAWN THAN FLOWERS. THIS PLAN IS BEST FOR A LARGE AND GROWING FAMILY. THREE FAMILIES LIVE ON THIS CORNER LOT AT BOURNVILLE. *See page 337*

EVERY COTTAGE GARDEN IN ENGLAND IS LIKELY TO HAVE ITS SPECIALTY. OUR COTTAGERS CANNOT HAVE LARGE DOUBLE ROSES LIKE THIS ALL SUMMER. *See page 337*

desire a hedge. A good time will come when board fences will be unknown. The cottager will tire of privet, because it is open at the base and costs too much to trim, lets the dogs into his flower beds. He will have barberry around his front yard because it is practically "pig tight, bull strong, and horse high," or at least horse *broad.* He will love it for its autumn colours and its red berries that last all winter. And he will never have to trim it.

Will American cottage gardens be less beautiful than the English? Not after a century or two, and that is a short time in the history of humanity. A good time is coming when the cottages will all be built of fire-proof material in an American style. They will be surrounded by neat and beautiful gardens. No two will be alike. One will be glorious when the dog wood blooms, another when the Virginia creeper colours; this will be fragrant with honey-suckle and trumpet creeper, that will be gay with bedding plants; some will have shrubbery borders, some will have old-fashioned flowers. All the homes will be healthful and happy. They will be as neat and attractive as the English, but they will be different. They will be American. And then our country will have found herself.

HOW TO SEE ENGLISH GARDENS

APPENDIX

HOW TO SEE ENGLISH GARDENS

"ENGLAND is one great garden." We often hear this phrase, but the glory of its meaning does not burst upon an American until he has set foot upon English soil. It means that every home has its garden; that every foot of ground not occupied by buildings is likely to be cultivated to the utmost; and that one cannot drive or ride or walk anywhere without seeing beautiful gardens.

Why, then, a guide? Because it is hard to get into the best gardens. It is easy enough to get into a private park, but it is as difficult to get into a man's garden as into his house. At first the red tape is irksome to an American. One hates to write to Lord So-and-so, look up the proper salutation in De Brett, ask for permission, wait a week until his lordship returns from the Ascot, and then have him set a date two weeks hence when you will be in France.

However, a good fee to the head gardener will often secure admission to a great garden, provided the family is away. Again, some of the most famous old gardens are open certain days and hours in the week under conditions noted in Baedecker. And, best of all, there is a perfect guide to all the great estates of England, which costs only a shilling. It is called "The Garden Annual," and can be ordered from *Gardening*, which is at 17 Furnival Street, Holborn, London, E. C.

This "Garden Annual" was a steady joy to me in the spring and summer of 1908. I spent eight weeks visiting gardens, and though

I travelled fast I did not see even one tenth of the most important estates. The experience was infinitely more delightful than concentrating on London, as most Americans do. It is pleasanter and more instructive to have a theme in travelling than to do ordinary sight-seeing. If you take gardens for your theme, it may rest you more than anything else, and you will get nearly, if not quite, as much history, architecture, and general sight-seeing, as the unthinking mob.

The ideal way to see gardens is by automobile. Railroads and cabs are a thorn in the flesh, because the former touch only the outskirts of a place and the long cab journeys to country seats are slow and costly. Moreover, the road views are better than those from the car windows. Finally, the Automobile Association in England really does things. Its sign in front of an inn means such comfort and hospitality as Americans only can appreciate, for we have nothing like them. When you have breakfasted in the garden back of the inn at Burford or slept in the oak room at Chiddingfold (twelfth century), you really pity from the bottom of your heart the mob of Americans who are sweltering in London.

No matter where you are, the "Garden Annual" will give you a list of all the beautiful estates in that locality or country. And in every locality there is a nurseryman or florist who will tell you which is the best place to see and how to see it with the least trouble. From horticulturists, also, you will hear about the big flower shows, of which the two most important are those at the Temple and Holland House. There is an endless succession of flower shows in all parts of the country, and they are usually crowded with fashionable people. If you are an enthusiast on shows you can get a full list from one of the gardening papers, for most of them publish calendars.

A SHALLOW FRONT YARD AND A DEEP BACK YARD IS THE FAVOURITE IDEA AT BOURNVILLE, WHERE THEY HAVE THE BEST COTTAGE GARDENS. INSIDE THE HAWTHORN HEDGE ARE FLOWER BEDS. PORTABLE IRON WORK PROTECTS THE HEDGE FOR A FEW YEARS

THE ENGLISH COTTAGER'S BACK YARD IS SURROUNDED BY A LOW HAWTHORN HEDGE. YOU CAN SEE OVER IT BUT IT KEEPS OUT DOGS, CATS, CHICKENS, CHILDREN, AND, TO SOME EXTENT, THIEVES. BOURNVILLE

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CLEVELAND

The chief flowers of each month are mentioned in the "Garden Annual," which also contains an "almanac" that can be used for writing in dates of flower shows, garden engagements, etc. English gardens are attractive the year round, because even in winter the grass is green and because it is a great country for broad-leaved evergreens, *e. g.*, holly, box, aucuba, etc. The loveliest time to visit England is from the middle of April to the middle of June. The first date is not too late to see millions of primroses and daffodils; the last is the time of rhododendrons and roses. But all flowers bloom longer there than here, and if you are late for your favourite flower in the south of England, you may catch it in Scotland by taking a night's journey.

The Mecca of botanists and gardeners in England is Kew Gardens. Any one who can spare but a single day for gardens should see that, because of the immense variety of flowers. Also the rhododendron dell and rock garden are models and the Royal Horticultural Society is the best of the kind in the world, and its hall and gardens are lovely. The college gardens at Oxford are also free to all and are one of the regular sights. Every loyal American ought to see them and come back and help to establish something of the kind here. Everybody thinks first of the King's gardens, but they are hard to get into, and one can be happy enough without moving heaven and earth for admission. Hampton Court is one of the show gardens of royalty where any one may go.

You will be sadly disappointed if you ask even the most intelligent English horticulturists what are the most interesting formal gardens, or wild gardens, or rock gardens, or water gardens, etc. The English mind does not work that way. They say, "You ought to see Blenheim, or Cleeve Prior, or Levens Hall,"

but they are rarely able to give you the slightest conception of what these places are like. Their minds are concrete and everything is coloured by social and aristocratic ideas. I never could tell whether I was going to see tragedy, tank drama, vaudeville, the "legitimate," or screaming farce. I therefore give a little list of gardens classified according to ideas that are more familiar to us. I give only the names of the estates, because there is an alphabetical list of them in the "Garden Annual"—but *not* of proprietors, as we should naturally have.

Bog gardens — Hillbrook Place.
Dutch gardens — Holland House.
Formal gardens — Cliveden, Penshurst.
Garden cities — Bournville, Letchworth, Port Sunlight.
Hardy gardens — Mr. Fremlin, Wateringbury.
Italian gardens — Wilton House.
Rock gardens — Friar Park, Leonardslee, Kew.
Royal gardens — Sandringham, Hampton Court.
Subtropical gardens — Mt. Edgecumbe.
Topiary gardens — Cleeve Prior, Levens Hall.
Water gardens — Gravetye.
Wild gardens — Gravetye.

As collectors usually know exactly where to go I will only mention a few collections of general interest:

Evergreens — Dropmore.
Orchids — Burford Lodge.
Rhododendrons — Deepdene, Dropmore.

In some cases there is more to be learned at nurseries and trial grounds than at gardens and shows. For instance, sweet peas are best studied on the seed farms of Essex and at the Sweet Pea Society's trial grounds. For new roses one should go to Cheshunt or to Belfast. Lovers of delphiniums go to Langport and Enfield. The place to see new trees and shrubs from China is Coombe Wood. The oldest rhododendrons are at Knaphill. In daffodil time crowds go to Surbiton. At Maidstone there is a gigantic collection of fruits, trees, and vines for forcing.

The ideal way to make an itinerary is to spend an evening at a good library over the sumptuously illustrated books, *e. g.*, "The Gardens of England," "Some English Gardens," "The Century Book of Gardening," etc. You have only to note on separate slips the name of each country place that you want to see. Everything else you can find out from the "Garden Annual," *viz.*, the county, locality, proprietor, and head gardener. On the boat you can sort your slips, and write on them anything else you desire. It is best to send fifty cents for the "Garden Annual," three weeks or more before sailing so that you may have it on the boat.

In case you have time to write for permission to see a garden, address the owner, not the head gardener. If there is not time, use the telegraph (not the telephone) and prepay the reply.

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INDEX

INDEX

NOTE: I do not claim that this is a perfect index, but it has been prepared on progressive principles. Our horticultural books would be far more useful if the pictures were referred to in the index. Nothing could be more inconvenient than the ordinary list of illustrations. The surest and quickest way to progress is to have clear-cut mental pictures of gardens and plants. Next to the things themselves come pictures. I want my readers to know exactly what I am talking about — the precise garden effect that is good or bad. Moreover, plant names usually bewilder beginners. They like to look up a name in an index and see if there is a picture of that plant. So, too, the ordinary index omits all or most of the big ideas contained in the book and, therefore, I believe the chapter headings ought to be in the index, as well as the table of contents, so that there will be only one place to look. Theoretically this means a little duplication, but practically it is better than dozens of worthless entries under such words as "the," "of," "an," etc. Away with mechanical methods! An author ought to make his own index and let common sense prevail over cast-iron rules. How can anybody make a good index who knows nothing of subject matter? — W. M.

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